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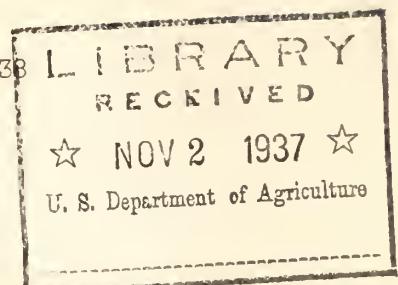
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UNITED STATES DEPARTMENT OF AGRICULTURE  
Bureau of Agricultural Economics

THE AGRICULTURAL OUTLOOK FOR 1937-38



Prepared by the staff of the  
Bureau of Agricultural Economics  
Assisted by Representatives of the Agricultural  
Adjustment Administration, the Extension Service, Bureau of  
Home Economics, and the State Agricultural Colleges and Extension Service.  
Washington, D. C., October 25-30, 1937.

Reports Included

Demand	Potatoes
Agricultural Credit	Sweetpotatoes
Farm Labor, Equip. etc.	Truck Crops for Market
Farm Family Living	Cabbage
Cotton and Cottonseed	Celery
Wheat	Snap Beans
Tobacco	Tomatoes
Feed Crops and Livestock	Onions
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Hogs	Oranges
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Mohair	Apples
Horses and Mules	Peaches
Soybeans	Cherries
Flaxseed	Pears
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Note release dates on first page of each report.

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## THE OUTLOOK FOR DEMAND AND PRICES IN 1938

### Summary

The demand for farm products probably will not be as favorable in 1938 as in 1937, according to the Bureau of Agricultural Economics. This outlook is based upon an analysis of the general situation, which indicates that in the fall of 1937 the upswing of the business cycle has been temporarily halted. Although it is impossible to determine definitely to what extent the present recession will continue into 1938, the chances appear to be against a sufficiently early and vigorous rise in 1938 to bring the average of industrial activity and of consumer incomes for that year up to that of 1937. Foreign demand is expected to show little, if any, improvement.

The trend of wholesale prices in the United States has been slightly downward since April 1937, and this general tendency is expected to continue into 1938, with lower prices for some raw materials, farm products and manufactured goods offsetting higher prices than in 1937 for some finished and semi-finished products.

Increased supplies of farm products in the United States and decreased supplies available in foreign countries should result in a materially larger volume of agricultural exports from this country in 1938. The larger volume is expected to move into export channels at lower average prices than in 1937.

Both prices and buying power per unit of farm products are expected to be lower in 1938 than in 1937. Cash farm income in 1938, including cash income from farm marketings and Government payments, may be somewhat less than in 1937.

### DOMESTIC DEMAND

The outlook for domestic demand for farm products depends upon prospective trends in industrial activity, consumer incomes, and the general price level.

Industrial production in 1937, at about 115 percent of the 1923-25 average, was about 10 percent higher than in 1936, and only slightly below the average for 1929. It probably will average lower in 1938 than during 1937, since the unfavorable factors in the situation seem to outweigh the favorable ones. Conditions during the second half of the year probably will be more favorable than in the first half.

The national income for 1938 is expected to be below the high level which prevailed in 1937, tentatively estimated to be about 69 billion dollars. Increases in wage rates recently effected and in prospect, together with the gradual pickup in income from miscellaneous sources which occurs during the upswing of the business cycle, may offset in part the decrease in industrial production and wholesale prices that may occur.

The wholesale price level in the United States probably will average lower in 1938 than in 1937, with prospective increases in some kinds of finished and

semi-finished products being more than offset by declines in prices of a number of raw materials, farm products, and some lines of manufactured goods.

All of these factors in the demand situation, of course, are closely related to changes in industrial activity. One of the best available measures of such activity is the Federal Reserve Index of Industrial Production, the principal individual components of which are steel, textiles, minerals, automobiles, food products, and leather goods. Changes in the production of some of these items, such as automobiles, affect the movement of the index directly, and also indirectly by causing variations in the production of raw or semi-finished materials such as steel. In order to evaluate the contributions of the different lines of industry to the movement of industrial production as a whole, the relative importance as well as the change in each item must be taken into account.

Fluctuations in the index numbers of industrial production since 1929 have been largely a reflection of changes in the output of steel, textiles, minerals, and automobiles. For example, in 1936 and the first part of 1937 a notable increase in industrial activity, as measured by these index numbers, represented very largely increases in the output of steel and textiles, and to a lesser extent minerals.

During the past year the textile industry has been operating at a very high rate. Cotton consumption by domestic mills during the season 1936-37 of 7,944,803 bales was the greatest on record, and in the first 8 months of 1937 was nearly 20 percent larger than a year earlier. For the first 7 months of 1937 domestic mill consumption of wool was 11 percent greater than in 1936. Technological improvements have resulted in an almost continuous upward trend in the domestic production and consumption of rayon during recent years, including 1937. Many textile mills were operating during the summer of 1937 largely on advance orders received the preceding spring, and by the latter part of the year unfilled orders had been greatly reduced and there were indications that considerable stocks of both cotton and woolen goods had accumulated in the trade. The lower cotton prices now prevailing will tend to offset part of these unfavorable conditions. Nevertheless, a considerable decrease in the output of textiles in 1938 compared with 1937 is expected. It seems probable that a substantial part of this decline will take place before the middle of 1938.

Steel production during the first half of 1937 totaled 29 million tons, compared with less than 22 million in the first half of 1936. During the summer the steel industry, also, was operating to a considerable extent on unfilled orders received during the wave of advance buying earlier in the year, and the usual fall pick-up in new orders has been tardy and thus far in disappointing volume. The extent to which this movement will continue is very difficult to determine, but an examination of the prospects for demand from the several industries using steel indicates that production in 1938 will be less than in 1937. Among these industries that use steel are automobiles, railroad and factory equipment, and building construction, all of which contribute importantly to industrial activity in other ways. Hence, the volume of activity in these industries has an important bearing on prospective demand for farm products.

### Demand and Prices - 3.

Some slackening in the rate of automobile production in 1938 compared with 1937 may occur. Sales to new users for the last 3 years have averaged about 1.5 million annually, which is about the same as in 1929. Replacement of obsolete cars sent to the scrap heap has been at the rate of about 2.5 million annually, or substantially below the estimated normal of 3 million. It appears probable that sales to new users will slow up gradually as those now without cars become owners, and replacement demand will become of relatively greater importance. During the depression the average age of cars increased, and as a result a large potential demand still exists, but replacements can be postponed rather easily for short periods. Experience shows that replacements are stimulated by important improvements in the mechanical and style features of automobiles, reductions in prices, easy credit terms, and improving business prospects. The reported relatively minor nature of the changes in models for 1938, the higher prices to be asked, the expected more stringent terms for financing purchases of both new and second hand cars, and the change in direction of stock prices and incomes, may result in a smaller replacement demand for automobiles in 1938 than in 1937.

A large potential demand for steel products from the railroads is indicated by the capacity and condition of existing equipment and road bed in relation to prospective traffic needs, but this demand will become effective only as the volume of traffic and net earnings make practicable the necessary financing of replacements and improvements. The larger crops of 1937 will add materially to the tonnage handled by many railroads, but increased wages and other costs may offset much of any increase in total revenues and result in a decrease in net earnings. The railroads, therefore, are likely to postpone as far as possible their orders for new equipment.

The building construction industry is one of the major outlets for steel, and of course for cement, lumber, and many other materials. It is one of the most important factors in the employment situation, because of the large number of workers engaged and also because of the relatively great fluctuations in building activity. Building activity experiences cyclical swings which seem to be of longer duration than the business cycle. The bottom of the present construction cycle apparently was reached in 1932-34, and an irregular advance is expected for several years. The value of total building during the first 8 months of 1937 exceeded the same period in 1936 by about 15 percent, but after allowing for higher costs, the increase in volume of construction apparently was only about 8 percent. The upward trend of the last 2 years has not continued into the latter part of 1937. In 1938 the total volume of construction is expected to be slightly greater than in 1937. This estimate is based upon prospects for little change in the volume of construction of public, commercial, and factory buildings, and an advance in residential building. Changes in the latter follow changes in the ratio of rents to construction costs. During the past year building costs increased from 10 to 15 percent, with an even greater increase for residential types of construction. This retarded the development of this industry in 1937. Some decrease in costs during 1938 is possible, and an increase in rents may occur. This increase in rents would tend to reduce the proportion of consumer income available for the purchase of farm products, but would also stimulate residential building and thereby contribute to larger total consumer incomes.



#### Demand and Prices - 4.

Prospects for industrial activity are based not only upon a summation of the prospects for these and other individual industries, but also upon the outlook for business conditions in general. These more general factors in the industrial situation include prospective government spending and economic policies, the degree of speculation in securities and commodities, interest rates, the volume of credit available for utilization by business and prevailing trends in such utilization.

Many of the conditions which in the past have been associated with the termination of a major cyclical upswing in business activity now are absent. This, like the above-mentioned conditions in individual lines of business, is important in any attempt to find in business trends a clue to prospective demand for farm products. Business debts are low, credit is cheap and plentiful, banking resources are not strained, there is no building boom, and there has been an absence of violent speculation of the type which frequently precedes the end of a business boom. The volume of security issues for new capital purposes during the first 7 months of 1937 was approximately 50 percent larger than in the same period of 1936. The needs for further expansion and rehabilitation of plant and equipment in many industries, together with relatively low interest rates may lead to further use of credit for such purposes during the next few years, although the recent declines in security prices and industrial activity will serve as a retarding influence. The volume of demand deposits and money in circulation is considerably in excess of the volume in the late 1920's and is, therefore, sufficient to support a considerably higher level of activity and incomes than prevailed at that time. Moreover, the large volume of gold in excess of requirements removes any danger that expansion might be checked by a deficiency in the monetary gold base. The expansion in the credit base is looked upon by many business forecasters as a fundamentally important influence calculated to carry industrial activity and prices to levels higher than any reached so far during the recovery, although compared with previous experience the increased monetary reserves are subject to a greater degree of control by monetary authorities. The general impetus of the upward movement of the business cycle is counted upon by these observers to carry industry ahead with no more than very temporary and minor periods of hesitation.

The volume of commercial bank credit, which has shown a continuous expansion from the end of the banking holiday in 1933 to the end of 1936, has since leveled off. The prospects are for little change in the aggregate for 1938. Commercial loans may be expected to continue to increase though at a somewhat slower rate than in the past year. Bank holdings of Government obligations, on the other hand, may continue to decline. This depends in part on whether a possible excess of Federal cash receipts over cash disbursements is used for the retirement of publicly held debt or for the sterilization of further gold inflows. Credit is expected to continue relatively abundant. This is expected to have a significant relation to agriculture, not only because of its bearing on business activity and consumer demand, but also through its influence on agricultural credit.

There are also a number of unfavorable indications in the general situation. The stimulus for rises in business activity at various times since 1933 has come, to a very considerable extent, from government spending, deficit financing, and monetary measures. The bonus distribution in 1936 undoubtedly proved to be a material stimulus to business last year. With the tendency to curtail government spending

and the expansion of credit by deficit financing through banks, such stimuli are likely to play a less prominent part in business advances during the next few years, and new elements in business will have to take up the slack caused by the gradual withdrawal of the Government from such engagements. An expected boom in building activity has been counted upon by many observers to more than offset any slackening of the Government's support to business, but present conditions in the building industry do not indicate any large expansion in 1938.

The general upswing of a business cycle usually is characterized by relatively short recessions. Business sentiment becomes less optimistic, security prices decline, and business men postpone extensive commitments for expansion or rehabilitation. These conditions in turn lead to hesitant buying by potential consumers of many products. Stocks of finished and semi-finished merchandise may accumulate in dealers' hands and orders received by manufacturers decline as buying is placed on a hand-to-mouth basis. Business appears to have entered such a phase in the latter part of 1937, following the period of decided optimism in the winter of 1936-37. It is difficult to determine how long such a recession will continue, but the appraisal of general conditions gives some support to the impression based on the situation for individual industries that it will run well into 1938.

The relation of this general outlook to the demand for individual farm products will be indicated more fully in the separate outlook reports for individual commodities.

#### FOREIGN DEMAND

Foreign demand for American agricultural products is expected to show little, if any, improvement in 1938. The current military operations in the Orient are resulting in a reduction in our trade with that area. Due partly to shorter supplies of some commodities in foreign countries and larger supplies available for export in the United States, however, the volume of agricultural exports from this country during the remainder of 1937 and the first half of 1938 is expected to be materially larger than a year earlier.

The situation in regard to supplies of agricultural products in foreign countries this year is more favorable to exports of these products from the United States than it has been for a number of years. Except in the case of cotton, foreign production of most agricultural products competing with United States agricultural exports is expected to be smaller during the current marketing year than was the case during last season. Canada has just harvested one of the poorest wheat crops in years. Supplies of grain in the Southern Hemisphere are at a low level and prospects in that area are for a wheat crop about 10 percent smaller than the crop harvested last year. In Europe, grain supplies have been reduced, livestock production is declining, and the fruit crop is smaller than the average size crop harvested in 1936.

The volume of total world trade in 1936 was 5 percent larger than in 1935, and during the first quarter of 1937 it was more than 12 percent larger than in the corresponding period of 1936. Barring new and unforeseen complications in international relations, some further improvement in world trade during 1938 is possible. Increased activity in the industrial countries



## Demand and Prices - 6.

and rising internal prices (unless offset by changes in exchange rates) tend to encourage imports, particularly of raw materials. The rise in prices of important raw materials and the increased quantity entering international trade during the last year or two have greatly improved the purchasing power of those countries that are large exporters of these products. Prices of some of these important international commodities will probably be lower in 1938 than in 1937, but prices in general are expected to be maintained at a relatively high level compared with recent years. The increased demand for industrial goods arising from the improved purchasing power in the countries supplying these products may be expected to influence favorably world industrial production and world trade.

Industrial activity in foreign countries continued to improve through the first part of 1937. In 1936, activity was 9 percent higher than in 1935 and during the first 6 months of 1937 was 10 percent higher than in the corresponding period of 1936. Indications point to a leveling off during the latter half of 1937, although few specific data are yet available.

A very important though unmeasurable part of the improvement in world industrial activity and world trade during the past year or more has been due to rearmament. A continuation of rearmament programs would help to maintain world industrial production and world trade in 1938 at relatively high levels.

The improvement in industrial activity and world trade has taken place in the face of relatively high trade barriers and has in itself contributed to some reduction in these barriers. During the past year there have been a number of reductions in import duties and charges and a loosening of quantitative control of imports in several countries. For example, most European importing countries have reduced their import barriers on wheat, and France and Italy made reductions in import duties on a number of products coincident with currency devaluation. An example of more general progress in this direction is the new Oslo convention whereby the Netherlands, Belgium, Luxemburg, Denmark, Sweden, Norway, and Finland agree to reciprocal reduction of quantitative import restrictions and agree not to increase certain tariffs. This agreement is open to other countries. Another outstanding example of influences in the direction of lower world trade barriers is to be found in the trade agreements program of the United States. Some further relaxation of trade barriers is in prospect during 1938-39, partly because of the sheer need of countries for each other's products.

It must not be overlooked, however, that a strong tendency toward self-sufficiency in a number of countries continues to exist. Germany and Italy furnish the outstanding examples. Moreover, the United Kingdom, the world's largest importer of agricultural products, continues to promote an expansion of domestic production, particularly of wheat.

Probably the most uncertain element in the foreign demand situation and one that must be reckoned with for the immediate future at least is the military conflict in the Orient. The effect of this conflict on our foreign trade depends to a considerable extent upon how effective a blockade of Chinese ports can be maintained and on the extent and duration of military activities. The destruction of Chinese cigarette factories and cotton mills will, of course, lessen the ability of that country to utilize American tobacco and cotton. In the past, however, similar though less extensive conflicts have resulted in increased

exports of wheat and particularly wheat flour to China. Exports of agricultural products from China, including various vegetable oils, animal hair, silk, and dried eggs, have already been curtailed and are likely to remain at low levels so long as military activities continue.

Of greater potential economic importance to the United States is the possible effect of the conflict on Japan's financial condition. The continuation of military activities on such a large scale is extremely costly and Japan has already instituted a strict control of imports, limiting them to absolute necessities and to war materials. Although exports of cotton to Japan have been very large in 1937, the situation in that country is expected to lead to curtailed purchases of American cotton in 1938.

### PRICES

The level of wholesale prices in the United States is expected to be lower on the average in 1938 than in 1937, with prospective lower prices for raw materials, farm products and some kinds of manufactured goods more than offsetting higher prices for some lines of finished and semi-finished products.

The trend of wholesale prices in the United States has been slightly downward since April, following an irregular upward trend for 4 years. The price dispersion among commodity groups, which was very large in 1933 as compared with 1926, had practically disappeared by early 1937, but has increased again in recent months. The ratio of wholesale prices of farm products to wholesale prices of nonagricultural products exceeded the pre-war level in the first quarter of 1937, but it has declined considerably since March. The decline in wholesale prices since April has been due in considerable measure to the recession in prices of farm products resulting partly from a more nearly normal production in 1937 than in the drought year of 1936.

Prices of most nonagricultural products advanced sharply in late 1936 and early 1937 owing to increased business activity, higher wage rates and forward buying in anticipation of labor troubles and advancing prices. Since April, prices of most manufactured products have advanced more slowly and have been offset in part by declines in prices of textiles, chemicals, and drugs. Unless or until wages, taxes and other costs are increased further, a large part of the rise in manufacturing costs may already have been reflected in wholesale prices. Consequently, lower prices for many raw materials and increases in labor productivity may result in lower prices for some nonagricultural products.

Retail prices probably have not yet reflected all of the rise in wholesale prices of manufactured products and in marketing costs. Indications point to some further increases in retail prices of furniture, furnishings, shoes, and fuel. The effect on living costs of these increases will probably be offset in part by lower prices of rayon and cotton clothing, meats, and some other foods. The rise in rents is expected to continue, though perhaps at a slower rate than in 1937.

The general level of farm prices reached its recovery high in January 1937 at 131 percent of the 1910-14 average. The trend has been downward since January and in September the index number of farm prices was 118 compared with 124 a year earlier. Farm prices are expected to average lower in 1938 than in 1937.



## Demand and Prices - 8.

With the changes in prices and marketings now in prospect, it seems probable that income from farm marketing in 1938 will be lower than in 1937. Income from Government payments under existing legislation, including those to cotton producers on account of the crop of 1937, will be greater. Taking into account both income from marketings and Government payments, cash farm income in 1938 may be somewhat less than in 1937. In the early months of 1938 larger volumes of crop and livestock marketings may offset decreases in prices. Marketings of farm products during the remainder of 1938 will depend to a large extent upon next year's crop outturn, but if domestic demand is near that for the corresponding period of 1937 any change in the supply of farm products may be about offset by an opposite change in price, thus maintaining income during this period fairly close to the level that prevailed in the corresponding period of 1937. This year, however, short wheat crops in other countries coincided with a heavy production in the United States, increasing the income from this commodity. Possible return to more nearly normal relationships in 1938 may reduce the income from this item in an amount sufficient to more than offset increases for some other products, thus causing farm income in the last half of the year to be somewhat less than in the same part of 1937.

Prices paid by farmers for commodities in September were about 130 percent of pre-war and 3 points higher than a year earlier. Some further advance in prices paid by farmers may occur during 1938 so that the buying power of farm income in 1938 is not expected to be as high as in 1937.

Prices in the major foreign countries have been advancing sharply for a little more than a year, although a tendency to level off recently has been evident in some countries. A combined index of wholesale prices in the moneys of seven foreign countries which take about 70 percent of our agricultural exports (England, Canada, Germany, France, Netherlands, Japan, China) has risen 19 percent since June 1936, when the sharp upward turn began. Although all seven countries contributed to this price rise, prices in France rose the most with a total advance of 54 percent, due partly to currency devaluation and partly to the newly adopted social legislation and reduced hours of labor per week. Prices in the Netherlands and Japan advanced next in order over those prevailing in June 1936 whereas prices in Germany have risen only 2 percent, because of governmental price controls. Higher prices are probable next year in France and Japan, whereas prices in England and some other countries may be a little lower. Consequently, price movements in foreign countries are not likely to have any great effect upon prices in the United States.



## Business statistics relating to the demand for farm products, specified periods

Year and month	:Nation- al income : 1/	:Nonagri- cultural income : 2/	:Indus- trial pro- duction : 3/	:Build- ing con- tracts : 3/	:Income :Factory: of :employ-:indus- ment :trial : pro- :workers:duction: : 5/	:Foreign: :indus- :trial : :pro- :duction: : 6/	:All :commod- ity : :prices : 7/	:Retail : food : prices : 8/	:Prices :			:Ratio of :Prices : prices :received : paid by:received : by :farmers: to :farmers: 10/ : prices : 9/ : paid
									1913	1910-14	1910-14	1910-14
Base period-	1929	1924-29	1923-25	1923-25	1923-25	1924-29	1923-25	1910-14	1913	1910-14	1910-14	1910-14
1929	100	107	119	117	105	106	136	139	166	146	153	95
1930	93	100	96	92	91	87	124	126	158	126	145	87
1931	78	86	81	63	77	67	111	107	130	87	124	70
1932	62	68	64	23	66	46	97	95	108	65	107	61
1933	57	63	76	25	72	43	107	96	105	70	109	64
1934	64	72	79	32	82	60	116	109	117	90	123	73
1935	68	77	90	37	86	67	121	117	127	103	125	86
1936	76	87	105	55	92	77	134	113	130	114	124	92
July		87	108	59	91	77	134	113	133	115	123	93
Aug.		87	108	62	94	78	135	119	133	124	126	98
Sept.		88	109	59	96	77	133	119	134	124	127	98
Oct.		90	110	57	97	81	139	119	131	121	127	95
Nov.		95	114	58	97	84	141	120	131	120	127	94
Dec.		101	121	66	96	87	142	123	131	126	128	98
1937												
Jan.		93	114	63	96	87	140	125	134	131	130	101
Feb.		94	116	62	99	88	142	126	134	127	132	96
Mar.		95	118	56	101	91	145	128	135	123	132	97
Apr.		96	119	53	102	94	146	128	136	130	134	97
May		97	118	56	102	95	147	128	137	128	134	96
June		97	114	61	101	94	148	127	137	124	134	93
July 11/		98	114	68	101	95	147	123	136	125	133	94
Aug. 11/		98	117	63	102	95	145	128	135	123	132	93
Sept. 11/		97	112	57				127	136	113	130	91

Business statistics relating to the demand for farm products, specified periods - Cont'd.

NOTES:

- 1/ Department of Commerce index of "national income paid out", 1929 = 100. Comprises the payments to or receipts by individuals in the form of wages, salaries, interest, dividends, entrepreneurial withdrawals, and net rents and royalties for these services.
- 2/ Industrial Relations Division of the Agricultural Adjustment Administration, 1924-29 = 100, adjusted for seasonal variation. Entire series was revised in July, 1937.
- 3/ Federal Reserve Board index, 1923-25 = 100, adjusted for seasonal variation.
- 4/ Bureau of Labor Statistics index, 1923-25 = 100, without seasonal adjustment.
- 5/ Bureau of Agricultural Economics, 1924-29 = 100, adjusted for seasonal variation. Includes factory workers, railroad and mining employees.
- 6/ Bureau of Agricultural Economics, 1923-25 = 100, adjusted for seasonal variation. Weighted average of index numbers of industrial production for nine foreign countries - United Kingdom, France, Germany, Italy, Japan, Canada, Belgium, Czechoslovakia, and Poland. Entire series was revised in July, 1937.
- 7/ Bureau of Labor Statistics index, 1910-14 = 100, without seasonal adjustment.
- 8/ Bureau of Labor Statistics index, 1913 = 100.
- 9/ Bureau of Agricultural Economics, August 1909-July 1914 = 100.
- 10/ Bureau of Agricultural Economics, 1910-14 = 100.
- 11/ Preliminary.

## THE CREDIT OUTLOOK FOR 1938

### Summary

The volume of short-term credit used by farmers and stockmen in 1938 is expected by the Bureau of Agricultural Economics to be at least 10 percent larger than in 1937 because of rising costs and need for replacements and additions to equipment.

Ample lending resources for meeting the increased credit needs are available at commercial banks and through agencies rediscounting with the Federal intermediate credit banks. Interest rates are likely to be little different from those prevailing in the current year.

The demand for new mortgage credit is expected to be small -- chiefly for the purchase of farms.

Loans will be available from the Commodity Credit Corporation to producers of cotton on the basis of 9 cents per pound on cotton classing 7/8-inch Middling or better. Policies relative to any corn-loan program will be announced later.

The loan program of the Farm Security Administration includes provisions for making loans of a type similar to those formerly made to farmers by the Resettlement Administration. This program includes standard rehabilitation loans for financing small farmers and the supervising of their operations, emergency rehabilitation loans to small farmers in areas affected by drought or other catastrophes for the purpose of enabling borrowers to maintain necessary livestock, and community and cooperative loans for the establishment of group services.

Past experience has indicated that the expansion of indebtedness on too heavy a scale in periods of rapidly rising farm prices frequently leads to future difficulties for farmers. Amounts borrowed for the purchase of farms should be consistent with the prospective earning power of the farms over a period of years with some margin of safety to protect against years of low prices or unfavorable weather conditions. In borrowing on short term to expand production, it should not be overlooked that the loans fall due within a relatively short period, and that unless farmers are prepared to pay these loans when due they run the risk of being forced to sacrifice livestock or equipment that are needed in their farming operations.

### Increased Short-Term Credit Needs Indicated

The volume of short-term credit used by farmers in 1938 is expected to be at least 10 percent larger than in 1937. Factors contributing to the increased demand for credit are the higher prices of commodities purchased and higher labor rates, the need for many improvements and replacements of a semi-permanent nature, and the need for funds to finance feeder and stocker purchases. The supply of feedstuffs from the crop of 1937 is larger than in any recent year and with a more favorable ratio of feed costs to fat-cattle prices, there will be a strong inducement to increase the number of cattle on feed.



Ample Loanable Funds Available

Ample lending facilities exist for meeting the anticipated increase in the need for short-term agricultural loans. Interest rates are likely to be little different from those prevailing in the current year (table 1).

Table 1.--Demand deposits of country banks <sup>1</sup>. (1924-29 monthly average = 100)

Year	20 leading agricultural States	Cotton grow- ing States	Corn Belt States	Range States
	Percent	Percent	Percent	Percent
Monthly average 1929 .....	99.0	93.0	97.2	103.6
" " 1932 .....	57.3	41.8	59.6	54.7
" " 1933 .....	48.6	41.4	48.8	45.8
" " 1934 .....	66.0	59.1	70.7	63.9
" " 1935 <sup>2/</sup> .....	77.5	71.2	85.3	77.1
" " 1936 .....	97.6	94.7	106.9	101.3
July ..... 1936 .....	99.1	89.7	109.7	100.7
July ..... 1937 .....	105.4	96.9	116.7	107.9

<sup>1/</sup> Deposits of member banks of the Federal Reserve System located in places of less than 15,000 population.

<sup>2/</sup> Average of first 7 months.

Demand deposits of country banks, which have shown a steady increase since the spring of 1933, have reached new high levels. Such deposits in 20 of the leading agricultural States were 105.4 percent of their 1924-29 monthly average in July, an increase of 6 percent over a year ago. The flow of funds into agricultural areas reflected by rising deposits has been partly offset, in their effect upon operating reserves of country banks, by an expansion of loans (table 2). Despite this expansion of loans which has led to a loss of reserves to urban areas, and despite the doubling of legal reserve requirements of member banks, excess reserves and readily salable investments of country banks are sufficiently large to afford the basis for an appreciable further expansion of loans.

Production credit associations and other agencies, such as agricultural credit corporations and livestock loan companies, that rediscount agricultural paper at the Federal intermediate credit banks, are likewise in a position to provide a plentiful supply of credit for sound agricultural loans. Federal intermediate credit bank debentures which are used to obtain funds for making these loans find a ready market at interest rates practically the lowest in history. No appreciable change in such interest rates is anticipated in 1938.

Table 2.--Outstanding short-term loans to farmers

Month and year	Commercial banks	Federally sponsored: credit agencies <sup>1/</sup>	Total
	1,000 dollars	1,000 dollars	1,000 dollars
December 31, 1920 .....	3,869,891	.....	3,869,891
December 31, 1923 .....	2,943,818	9,105	2,952,923
June 30, 1931 .....	1,936,360	79,206	2,015,566
December 31, 1934 .....	807,613	203,626	1,011,239
June 30, 1936 .....	661,606	229,506	891,112
December 31, 1936 .....	593,614	171,517	765,131
June 30, 1937 .....	726,400	230,302	956,702

<sup>1/</sup> This series includes short-term loans similar in character to those made by commercial banks, excluding emergency drought, rehabilitation, and seed loans. Types of loans included are Federal intermediate credit bank loans to, and discounts for "other financing institutions", regional agricultural credit corporation loans, and production-credit association loans.

## The Credit Outlook for 1938 - 3.

The lending position of country banks and the various agencies rediscounting with the Federal intermediate credit banks will be further strengthened in the next few months by a flow of funds from the marketing of crops and livestock, relatively larger than in the same period a year ago. This will lead to a further rise of deposits and favorable collections on outstanding loans. Collections during the current year are exceptionally large on range cattle and sheep loans (except in those areas affected by the drought) and on loans for producing tobacco; fair to good on cotton-production loans; and less favorable in many areas on loans to finance fruit and vegetable production, particularly potatoes.

At the same time, the position of the farmer as a credit risk has further improved. The rise in farm commodity prices in the last few years, particularly in livestock prices, has increased the value of the collateral that farmers can offer as security for loans. In addition, many farmers have added to the value of their plant and equipment by replacements and additions to machinery and to farm improvements. During the last few years of rising farm income, delinquent taxes and interest also have been further reduced.

The credit needs of farmers will be reduced, in part, by payments made under the Agricultural Conservation Program and by cotton-adjustment payments.

Disbursements under the 1937 Agricultural Conservation Program may reach a total of \$440,000,000. It is expected that between 5 and 10 percent of these payments will be made during the last 2 months of 1937, with the bulk of the payments being disbursed to farmers in the first quarter of 1938. In connection with an analysis of the effect of these payments on the credit needs of farmers, consideration should be given to the number of people believed to be eligible for participation in the program. It is estimated that the number of grants to be made under this program may exceed 4,100,000.

The Commodity Credit Corporation has announced a cotton-loan program providing for the making of loans to producers of the 1937 crop on the basis of 9 cents per pound on cotton classing 7/8-inch Middling cotton, or better; 8 cents per pound on cotton classing 13/16 inch in staple, and Middling or better in grade;  $7\frac{3}{4}$  cents per pound on cotton classing 7/8 inch as to staple but under Middling as to grade. The requirements also stipulate that no loan will be made on 7/8-inch cotton or better in staple which is of a grade not deliverable on contract under the regulations of the New York and New Orleans cotton exchanges, and no loans will be made on 13/16-inch cotton under Middling grade.

Under the cotton price-adjustment-payment plan announced on August 30, 1937, the Secretary of Agriculture is authorized to use not to exceed \$130,000,000 for payment to cotton producers who show proof of compliance with a 1938 agricultural program to be formulated under legislation to be enacted pursuant to Senate Joint Resolution 207, and who sell cotton from the 1937 crop prior to July 1, 1938. The amount to be paid to such cotton producers will be the difference between 12 cents a pound and the average price of 7/8-inch Middling cotton on the 10 spot markets on the day of sale, but not to exceed 3 cents a pound. Payment will be made on 65 percent of a producer's base production, unless such payments do not approximate the \$130,000,000 appropriated, in which case payments will be made with respect to a larger proportion of the base production.



At this time consideration is being given to the advisability of conducting a corn-loan program with respect to the 1937 corn crop. The policy of the Administration concerning such a loan program will be determined at approximately the time the corn crop of the Corn Belt starts moving to market.

The need for emergency loans and grants to meet situations caused by drought or flood will probably be considerably smaller in 1938 than in 1937. The area affected by drought in 1937 is smaller than in 1936, when farmers in severely affected areas required substantial help to meet living and production expenses until the new crops matured. Moreover, floods in the spring of 1937 caused more extensive damage than those usually occurring. With abundant supplies of feed crops and enlarged incomes, more farmers enter 1938 in better position than last year to carry on without special emergency assistance.

#### Loans Available Through the Farm Security Administration

On September 1, 1937 the rural rehabilitation and relief activities formerly performed by the Resettlement Administration were placed under the Farm Security Administration, which is also under the direction of the Secretary of Agriculture.

In the coming year the Farm Security Administration will make loans as follows:

Standard Rehabilitation Loans.--This phase of the program consists essentially of financing small farmers and supervising their operations under acceptable farm and home management plans. Loans will be made to farm owners, farm tenants, share-croppers, farm laborers, or persons who, when last employed, obtained the major portion of their livelihood from farming operations. These persons must be unable to obtain credit from private sources or other Government agencies and be possessed of personal characteristics and have available land resources, either owned or rented, of such nature as to give promise of a successful outcome of farm and home management plans. Standard rural rehabilitation loans are not made for the purpose of refinancing real estate indebtedness or aiding in the purchase of real property.

Emergency Rehabilitation Loans.--The phase of the program that deals with emergency rehabilitation loans consists principally of making loans to eligible persons as enumerated above in areas affected by drought or other catastrophes for the purpose of enabling borrowers to maintain necessary livestock.

Group Service.--In certain instances where it is determined that eligible persons as enumerated above can best be aided by loans to groups or individuals for the establishment of group services, such loans will be made. The establishment of bull rings, jack cooperatives, and the like, would fall in this category.

In addition to the above, grants will be made to eligible persons on farms whose material and credit resources are inadequate to meet accepted subsistence requirements to maintain health and prevent human suffering.

During the last fiscal year new standard loans and supplemental loans to standard cases were approved for a total amount of \$54,000,000. During the same period a total of \$17,000,000 was loaned for emergency purposes. Subsistence grants totaled \$34,000,000, of which \$22,000,000 was required in drought areas.

Farm Mortgage Credit

The demand for new farm-mortgage loans in 1938 is expected to be light in view of the reduction in the demand for emergency refinancing and the relatively small volume of loans required for the purchase of farms. During the first half of 1937 there were decreases in the outstanding farm-mortgage loans of all the principal lending agencies except commercial banks (table 3). Although the volume of new loans made by the Federal land banks and Land Bank Commissioner in the first 6 months amounted to \$59,665,000, this was more than offset by repayments of principal and the reduction occasioned by foreclosures. The increase in farm real estate loans of commercial banks in the first half of the year is in part seasonal, reflecting the use of real estate security for crop production loans.

Table 3.--Outstanding farm-mortgage loans of leading lending agencies, 1929-37

Year ended January 1	Federal land bank and Land Bank Commissioner	Life insurance companies	Commercial banks	Joint stock land banks	Three State credit agencies
	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars
1929 .....	1,194,821	2,138,980	2/	656,516	95,906
1930 .....	1,198,514	2,105,477	2/	626,980	93,274
1931 .....	1,189,604	2,059,221	3/ 945,172	590,811	92,698
1932 .....	1,167,898	2,007,361	2/	536,644	93,014
1933 .....	1,128,564	1,869,160	2/	459,183	84,075
1934 .....	1,303,445	1,661,046	3/ 555,885	392,438	79,574
1935 .....	2,532,617	1,258,900	498,842	255,931	62,286
1936 .....	2,866,651	1,054,770	487,505	175,677	48,091
1937 .....	2,900,937	936,454	487,534	133,499	32,657
1937 (Aug.1) :	2,880,000	4/ 894,759	3/ 504,138	113,234	2/

1/ Including banks in receivership.

2/ Data unavailable.

3/ June 30.

4/ Estimated.

Available data on mortgage recordings indicate continuation of increased activity in farm mortgages by private investors. During the first 6 months of 1937, estimated farm-mortgage recordings by other than Federally sponsored agencies increased 11 percent over the first half of 1936 and amounted to 50 percent more than during the corresponding period of 1934 when the volume of such recordings was abnormally small. Mortgage recordings include renewals and refinancing of existing mortgages and to that extent do not represent additions to the outstanding debt. However, they do indicate the extent to which various lending institutions are making their credit facilities available to farmers, either through renewal and refinancing of existing mortgages or through the making of new loans. A portion of such recordings represents mortgages taken in connection with the sale of acquired real estate (table 4). A comparison of table 3 with table 4 indicates that despite the increase in recordings, outstanding farm-mortgage loans of life insurance companies have continued to decrease during the first half of 1937.

Table 4.--Estimated amount of farm mortgages recorded in the United States during the first 6 months of 1934, 1935, 1936, and 1937, by type of lender

First 6 months of	Federal land banks <sup>1/</sup>	Land Bank: Commis-sioner <sup>1/</sup>	Private lenders <sup>2/</sup>					Total all lenders
			Total	Indi-viduals	Commer-cial banks	Insurance companies	Others	
(Thousands of dollars)								
1934	432,950	309,997	238,278	115,857	56,591	20,732	45,098	981,225
1935	151,795	124,959	300,676	141,300	85,004	37,668	36,704	577,430
1936	67,928	48,133	321,657	134,872	94,003	56,619	36,163	437,718
1937	36,275	23,390	358,532	145,285	116,676	69,492	27,079	418,197
(Percent of total)								
1934	44.1	31.6	24.3	11.8	5.8	2.1	4.6	100.0
1935	26.3	21.6	52.1	24.5	14.7	6.5	6.4	100.0
1936	15.5	11.0	73.5	30.8	21.5	12.9	8.3	100.0
1937	8.7	5.6	85.7	34.7	27.9	16.6	6.5	100.0

<sup>1/</sup> Actual number of loans closed exclusive of Puerto Rico.<sup>2/</sup> Based on reports from counties including from 38 to 49 percent of the farms in the United States.

### Collections

With prospects that farm income in the remainder of 1937 and in the first part of 1938 will be well maintained, and with better geographic distribution of the income than for several years, further improvement in collections on farm mortgages appears probable during the coming year. Collections on Federal land bank loans showed improvement from 1936 to 1937 in all geographic divisions except the West North-Central States. Although the moratorium granted by Congress permits borrowers to postpone principal payments coming due before July 11, 1938, all matured installments had been paid in full, as of June 30, 1937, on 77.8 percent of the outstanding Federal land bank loans. This compares with 75 percent a year earlier and only 64 percent 2 years ago. Apparently many farmers have felt that reduction of debt was the soundest use they could make of available receipts, even during these years of only fair income (table 5).

Table 5.--Condition of Federal land bank loans outstanding, June 30, 1936 and 1937<sup>1/</sup>, by geographic divisions

Geographic division	Percent of loans with all matured installments paid by borrowers		Percent of delinquent loans including loans with delinquent installments and/or delinquent extensions		Percent of loans with all matured installments extended but with no delinquency in such extensions	
	1936	1937	1936	1937	1936	1937
North Atlantic . . . .	84.7	90.0	14.8	9.4	.5	.6
East North-Central . .	85.0	88.2	11.8	8.1	3.2	3.7
West North-Central . .	69.0	65.4	21.2	12.6	9.8	22.0
South Atlantic . . . .	75.5	81.1	13.9	8.2	10.6	10.7
South Central . . . . .	73.6	79.1	14.2	11.1	12.2	9.8
Western . . . . .	71.7	77.9	21.2	16.0	7.1	6.1
United States . . . .	75.0	77.8	16.5	11.2	8.5	11.0

<sup>1/</sup> Farm Credit Administration.



New legislation has made it possible for borrowers of the Federal land banks to deposit funds for later use in making regular semi-annual or annual payments on Federal land bank loans. The utilization of this new privilege of building up financial reserves should encourage and assist borrowers from such institutions in keeping their loans in good standing in subsequent years of depression, crop failure, or family misfortune. Deposits drawing interest may now be placed with these banks when funds are available from income or other sources and will be held by them only for application on the loan when low receipts or unusual expenses make the interest and installment payments particularly burdensome.

#### Credit for Financing Purchases of Farms by Tenants

The Farm Security Administration in 1937 will enter upon a program of financing the purchase of farms for tenants in accordance with the provisions of the Bankhead-Jones Farm Tenant Act of July 22, 1937. A total of \$9,500,000 is available for this purpose, an additional \$500,000 being provided for administrative expenses. This sum will be distributed among the various States on the basis of farm population and the prevalence of tenancy. It is estimated that this will provide for the purchase of from 2,000 to 2,500 farms during the coming year. For purposes of simplifying administration, the farms to be financed during the coming year (1938) will be concentrated in about 300 counties. The interest rate on loans will be 3 percent and the term may not exceed 40 years. Loans will be made only for the acquisition of farms sufficient in size to constitute efficient farm-management units. Preference will be given to persons who are able to make an initial down payment or who are owners of livestock or farm implements necessary for successful farming operations.

#### Debt Adjustment

Assistance in the voluntary adjustment of indebtedness between farmer debtors and their creditors will be continued by the Farm Security Administration. During the year ending June 30, 1937, adjustments were made in a total of 27,000 cases involving a total indebtedness of \$96,000,000. A reduction of \$25,000,000 in indebtedness was effected, and the debtors benefited were enabled to pay \$1,724,000 in back taxes to local governments.

#### Caution Needed in Use of Credit

During the last several years land values have shown a distinct upward trend from the low point of 1933. This trend is the natural reaction to the higher prices and incomes that have been received in recent years and to the lower interest rates and tax rates that have existed. It is probable that some further effect of these factors will tend toward higher land values. As the liquidation of distressed holdings of real estate declines, the effect of such large holdings as a factor restraining a rapid rise in land values may be expected to decline somewhat. On the other hand, taxes can hardly be expected to remain indefinitely at present levels, unless the demand for public services shows a decline.

## The Credit Outlook for 1938 - 8.

In view of the current rising trend in land values, it is appropriate to recall that many of the difficulties of farmers since 1920 have been closely associated with overcapitalization and overborrowing attending the boom in land prices culminating in 1920. Ordinarily, purchase-money mortgages, as well as other types of loans must be repaid through the earnings of the farm. The price paid and the amount of the loan, therefore, should be consistent with the prospective earning power of the land over a period of years with some margin of safety to protect against years of low prices or unfavorable weather conditions.

Past experience has also shown that similar considerations should govern borrowing for the production of crops or livestock and borrowing to increase machinery and equipment or to make repairs and improvements on farms. Essentially the proper functions of credit are to increase the income of the borrower or to serve as a means of meeting emergencies for which ready cash is lacking. If used in excessive amounts, however, credit encourages undue expansion of production, unjustified expenditures for equipment and improvements, and the incurring of risks that may end disastrously.

Though the same general precepts apply to all kinds of credit, there is one respect in which farmers should distinguish between long-term and short-term credit. As the former type of loan extends over a period of years, such loans will cause little trouble if the annual charges for amortization fall well within the farmer's margin of savings during the period. Short-term loans, in contrast, usually come to maturity within a few months and ordinarily cannot be paid from annual net earnings or savings. Short-term production loans should be regarded as items of current expense on which payment is deferred for a short period, and farmers should try to make certain that their gross income will cover these loans, as well as other expense items, by the time they mature. Failure to make this distinction has caused many farmers to incur excessive short-term debts that could not be liquidated when payment was demanded except by sacrificing livestock or equipment badly needed in their farming operations. Though such experiences often have resulted mainly from the use of too much credit, the principal difficulty in other cases has been that short-term credit was used for purposes that could be served safely only by long-term credit.

## THE OUTLOOK FOR FARM LABOR, EQUIPMENT, FERTILIZER FOR 1938

### Summary

The level of prices of commodities and wage rates used in agricultural production probably will average a little higher during 1938 than in 1937, states the Bureau of Agricultural Economics in summarizing next year's outlook for farm labor, equipment and fertilizer. Farm wage rates have been advancing since 1933 and are expected to average somewhat higher in 1938 than in 1937. This advance in farm wage rates was greater than the rise in living costs and is likely to continue greater, but farm wage rates are likely to remain low relative to living costs in 1938.

Along with higher wage rates, farmers apparently will have to pay somewhat higher prices for farm machinery, automobiles, building materials, equipment and supplies. Fertilizer prices also will be a little higher but advances in these prices are not expected to be as large as for other groups. On the other hand, the prices of feed, which represents an important proportion of the costs of many farmers, will be substantially lower than a year earlier at least in the first half of 1938. Seed prices, during the spring planting season, also will be considerably lower than in the spring of 1937.

### Farm Labor and Wage Rates

Farm wage rates are expected to average higher in 1938 than in 1937. A larger and better distributed farm income in 1937 than for a number of previous years has placed the farmer in position better to compete with the increased non-farm demand for labor, and the higher wages being paid in industry. Although prices received by farmers have been declining since January 1937, farm income has been maintained above a year earlier as a result of larger crop production. A continuance of the relatively high level of farm income and high hourly wage rates in industries other than agriculture will have a strengthening effect on wages of farm workers next year. Even if farm wage rates do not continue their sharp upward trend next year but make about the usual seasonal changes from now on, the 1938 average wage level will be the highest recorded since 1931.

### Farm Wage Rates

(Per month with board)

Year	Jan. 1	Apr. 1	July 1	Oct. 1
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
Av. 1925-29	32.27	34.57	35.62	35.65
1933.....	14.77	14.67	15.84	17.19
1936.....	18.54	20.89	22.07	22.51
1937.....	20.68	23.38	25.28	25.51



Marked Upward Trend in Wage Rates Since 1933.- There has been a marked upward trend in farm wage rates since April 1933, the annual increase averaging about 11 percent. During the same period, hourly wage rates in manufacturing industries have increased an average of 9 percent per year. In 1937, all quarterly indexes of farm wage rates were higher than the pre-war average for the first time since 1931, the index for October 1 reaching 126. By the first of October, the recovery from depression lows ranged from 144 percent in New England to 205 percent in the West North Central States.

It is likely that farm wage rates in 1938 will make additional small gains in purchasing power as they have each year since 1933, but will not quite reach pre-war levels. During the years 1923-30 the level of farm wage rates averaged 4 percent higher than the rural cost of living (as measured by prices paid by farmers for commodities used in living). By 1933 both indices had fallen sharply, but wage rates dropped the fastest and the purchasing power of wage rates had declined to 73 percent of its pre-war average. At the same time there was wide-spread unemployment. Since April 1933 the index of cost of living has risen 30 percent, from 99 to 129; and that of farm wage rates 73 percent, from 73 to 126. The farm wage has gained in purchasing power, which averaged 88 percent of pre-war this year. While it will rise further in 1938, farm wage rates probably will not be as much above the pre-war average next year as will living costs.

The supply of labor available for farm work was considerably above normal from July 1929 through March 1935. It remained high relative to demand until April 1937. Since that time the supply-demand ratio has been below 100, indicating a shortage of farm labor at prevailing wage rates. This year, harvest labor has been reported extremely scarce in some areas. These changes in the agricultural labor supply are primarily reflections of changes in employment in other industries. The supply of workers in rural areas in 1938 is likely to show little change from this year's level.

Increased Mechanization Probable.- Higher wage rates in 1938 are expected to encourage increased mechanization of the farm business in types of farming adapted to it. This will, in the long run, tend to minimize the effects of prospective increases in the demand for farm labor.

Available information regarding total farm employment indicates that the number of workers in agriculture decreased almost every year from 1929 to date. Total employment on farms of crop reporters, which averaged only 292 persons per 100 farms during the first 8 months of this year, was only 83 percent of the corresponding period of 1929. This reduction was largely in the number of family workers. The average of 89 hired workers per 100 farms through August of this year was 8 more than during the corresponding period of the drought year 1934 but compared with 111 hired hands during the first 8 months of 1929. Farmers reduced their hired labor force sharply when cash income dropped precipitately after 1929. Labor requirements were materially lowered by crop adjustment programs and drought from 1933 to 1936. Increased purchases of the new and more efficient types of farm machinery in the last few years, however, have enabled farmers to make more efficient use of their labor force. In consequence, the number of hired workers has risen but little during the

past year despite sharp increases in crop production.

### Farm Machinery

A rise in prices of farm machinery is expected in 1938, mainly due to increased costs of manufacture. Thus far in 1937, hourly earnings in manufacturing industries have averaged 11 percent higher than during the corresponding period in 1936, and were 16 percent higher than in 1929, according to reports of the National Industrial Conference Board. The cost of materials going into the manufacture of farm machinery also has risen during the last several years. As a result, the index of retail prices paid by farmers for machinery (excluding tractors and automobiles) has risen from 149 percent of pre-war in 1936 to 153 in June of this year or the same as the average for 1929. Tractor prices declined 7 percent from 1929 to 1933. Increases since that time have raised the level of tractor prices to a point 3 percent above 1929. The higher level of wages and materials in 1937 seems likely to be reflected in some further price increases for farm machinery next year. Automobile price increases on 1938 models have already been announced by most manufacturers.

Manufacturers' sales of farm machinery are expected this year to exceed those of 1936 by 30 to 40 percent. Last year the dollar volume of domestic sales amounted to 400,000,000 or within 11 percent of sales of the same implements in 1929. With favorable crop conditions, and farm income at or near present levels in 1938, production and sales of farm machinery may exceed those of 1937 as well as the 1925-29 average, but the lower prices of some farm products doubtless will tend to curtail the purchases of implements in some areas.

The increasing use of pneumatic tires on agricultural tractors and field machinery, and the appearance of mowers, planters, cultivators and harvesting machinery that may be quickly attached direct to tractors are two of the major developments in the farm machinery field. These quick attachable machines are often in larger units than those previously purchased by farmers and are made to operate at higher speed and to be operated by one man, thus greatly relieving the labor requirements on farms. It is probable that a still greater percentage of tractors will leave the factories on rubber tires in 1938. As a result of the higher prices of rubber tired equipment, an increase in the proportion of such machines will increase the average prices paid by farmers in 1938 irrespective of price movements of identical items.

In the use of electric service on farms, more farms will be connected in 1937 than in any previous year. By the end of 1937 it is estimated that one and one-fourth million farms will be receiving electric service. Projects amounting to over \$50,000,000 have been approved by the Rural Electrification Administration and construction is under way to serve 150,000 additional farms. Private utilities have lines under construction which will add 75,000 more.

### Building Materials

Building costs to farmers in 1938 may be somewhat higher than in 1937. Wholesale prices of building materials, particularly lumber, have advanced sharply during the past year, and this has been reflected only

partially in the level of prices paid by farmers. Wage rates for building have also advanced during the past year and may advance more in 1938.

Because of the large amount of building materials usually carried in local lumber yards, there is generally a considerable lag between advances in wholesale prices of building materials and advances in retail prices. During the past year, prices paid by farmers for building materials have advanced about 7 percent, whereas wholesale prices have advanced 13 percent, most of the advance occurring in the first half of 1937.

The advance in wholesale prices, however, was considerably different for different types of building material. In June, lumber prices were 24 percent higher than a year earlier, whereas brick and tile prices were up only 6 percent, paint materials 5 percent, and cement prices were unchanged from a year ago. Since lumber is a major portion of the building materials purchased by farmers, it seems probable that unless wholesale prices decline from present levels retail prices of lumber to farmers will average higher during the coming year. Changes in labor costs for farm construction are closely associated with changes in farm wage rates. Farm wage rates are expected to make some further advances in 1938, indicating that labor costs for construction in 1938 will be somewhat higher than in 1937.

Index of Prices Paid by Farmers for Building Materials  
Used in Production (Average 1910-14 = 100)

Year	Mar.15	June 15	Sept.15	Dec.15
1936	145	147	146	147
1937	155	157	157	

#### Fertilizer

Retail prices of fertilizer during the 1938 fertilizer season will average higher than a year earlier and probably the highest since 1931. Even with this rise, retail prices of fertilizer will be between 105 and 110 percent of the 1910-14 average, compared with 102 percent in 1937.

During the past year wholesale prices of superphosphate, mineral ammoniates and potash salts have increased from 8 to 11 percent. Prices of organic ammoniates have declined but wholesale prices of all ingredients during the third quarter of 1937 averaged about 8 percent above prices during the same period in 1936. These higher wholesale prices of fertilizer materials in the fall months will probably be reflected in higher retail prices during the coming fertilizer season.

The fertilizer tonnage in 1937 was about as large as the preceding peak in 1930. This relatively large tonnage occurred even though the amount of fertilizer used on cotton in 1937 was decidedly less than the pre-depression average. The relatively high level of agricultural income, which is an important factor in determining the quantity of fertilizer purchased, indicates a relatively strong demand for fertilizer during 1938. The tonnage sold may be about as large as in the preceding season even though retail prices are higher.



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Bureau of Agricultural Economics  
Bureau of Home Economics

THE OUTLOOK FOR FARM FAMILY LIVING IN 1938

Summary

For the country as a whole, net cash income available for farm family living and for savings has been higher in 1937 than in 1936, but may be somewhat lower in 1938 than in 1937.

Total income from farm marketings in 1938 may be somewhat lower than in 1937 since the expectation is for some decline in the demand for farm products. The expenses of production in 1938 are likely to be slightly higher than in 1937, because of rising wage rates and increased prices for many materials used in production. Consequently, the net money returns from marketings which remain after paying the expenses of production probably will be smaller in 1938 than in 1937. Income from Government payments in 1938, including those to cotton producers on account of the 1937 crop, are expected to be somewhat greater than in 1937. However, this income in Government payments is not likely to be sufficient to offset the decline in net returns from marketings. Hence in 1938, farm money income (receipts from marketings and Government payments) may tend to be lower than in 1937.

Income from farm marketings and from Government payments is supplemented by more or less money income from nonfarm sources. The extent of this supplementation probably will be no greater in 1938 than in 1937; hence total cash income available after meeting farm production expenses may decline somewhat.

The farm family's net cash income from farm and nonfarm sources is allocated to purchases for family maintenance, to payment of debts, and to increase of assets. The proportion of the available funds allocated to increasing net worth tends to rise as money income rises.

The amount of goods and services which a given amount of cash will provide for family living -- the purchasing power of this money income -- depends upon price levels. Retail prices of some commodities, such as automobiles, furniture, furnishings, shoes, and fuel, may increase somewhat in 1938. The rise in marketing costs and in wholesale prices of some manufactured goods during 1936 and early 1937 have not yet had their full effect in retail markets. However, lower retail prices for other important items of family living, as for some foods and perhaps cotton and rayon clothing, will tend to offset these price increases, so that total living costs of farm families probably will not change greatly in 1938 unless there is a marked change in the general price level.

## Farm Family Living - 2

Judging from the ways of spending now current among farm families, it seems probable that low-income groups will devote the increased amounts made available for family living in 1937 largely to food, clothing, and the automobile, although small increases will be made in each of the main groups of living expenses. Even in the case of the more well-to-do, a portion of the increase will go for food, but considerably more will go for the purchasing and operating of automobiles, for clothing, medical care, for furnishing and running the house, and for recreation. With net money incomes of farm families in 1938 expected to be a little lower than in 1937, and with prices of goods and services needed for living about the same or a little higher, expenditure patterns in 1938, while not expected to change much from those of the last 2 years, probably will tend toward economy rather than toward increased spending.

Home production of food and fuel as a means of providing nonmoney income has been stimulated by the educational programs of the Extension Service and the Farm Security Administration. Governmental policies which have encouraged increased use of land for feed crops, have had as one consequence an increase in the quantity of home-produced milk, eggs, and meat for family use. Since the buying power per unit of farm products is expected to be lower in 1938 than in 1937, the farm family may find it advantageous to plan a well-balanced 1938 program of production of food and fuel for its own use, thus conserving cash for goods and services which the farm cannot readily furnish.

Cooperative buying of consumption goods may increase somewhat along with increase in cooperative buying of farm production goods. The demand for informative labelling and selling by grade to consumer buyers is growing.

### Money Income from Farming

#### Gross cash income, United States as a whole

The income of farmers from marketings of farm products and from Government payments has been estimated at 9 billion dollars for the calendar year 1937. This represents an increase of 14 percent over the \$7,865,000,000 income of 1936, is more than twice as large as the \$4,328,000,000 received in 1932, and is the highest for any year since 1929, when income from farm marketings totaled \$10,479,000,000. Of the expected gross income increase of \$1,135,000,000 in 1937 over 1936, receipts from farm marketings account for about 1 billion dollars, and larger Government payments for the remainder.



## Farm Family Living - 3

Greater receipts from sales in 1937 were due chiefly to higher prices in the first part of the year and, in the latter part, will be due to larger crops. Since considerable portions of many of the important crops will not be marketed until early 1938, farm income for 1937 will not show the full effect of this year's large crop outturn. Income from livestock and livestock products thus far in 1937 has shown only a small increase over 1936 and during the remainder of the year is not expected to exceed the 1936 income. It is important to note that only a small part of the 1937 cash receipts from livestock represents returns from sales of capital assets, such as foundation breeding stock. During the drought years such sales contributed heavily to the money receipts of farmers in certain areas.

In 1938, with the changes in prices and marketings now in prospect, it seems probable that total income from farm marketings may be somewhat lower than in 1937. Income from Government payments, under existing legislation, including those to cotton producers on account of the crop of 1937, will be greater. Taking into account both income from marketings and Government payments, the total cash farm income in 1938 may be somewhat less than in 1937.

Government payments to farmers during 1937 have been larger than in 1936. During the first 9 months of this year such payments amounted to \$350,000,000 as compared with \$287,000,000 for the entire year of 1936. A small part of the payments on the 1936 agricultural conservation program are still to be made and will supplement the payments already begun on the 1937 program, for which \$500,000,000 was appropriated. The estimated cash income of farmers during 1937 includes only the actual government payments which will be made in the calendar year which probably will be from \$400,000,000 to \$450,000,000.

### Farm production expenses

Increased expenditures for farm production have offset to some extent the higher gross cash farm income of 1937. Higher prices for seed, fertilizer, feed, and other supplies as well as higher wage rates paid to farm labor, and the greater quantities of these goods and services required to produce the larger crops of 1937, all combined to increase farmers' total expenses for production.

### Net cash income from farming

Net cash income available to farm operators after deducting production expenses will be considerably higher in 1937 than 1936, the increase in gross income being sufficient to more than offset the rise in farm production expenses of 1937. However, in 1938, if the total cash income from marketings and from Government payments should be less than in 1937, and if expenses of farm production remain about the same or continue upward, the net cash income of farm operators probably will be somewhat lower than in 1937.

Receipts by regions

Because crop production in 1937 was more nearly normal than in such years as 1934 and 1936 when drought was widespread, farm income during 1937 and the first half of 1938 will be more evenly distributed throughout the country. Although in the drought years the prices of many farm products advanced sharply, this advance did not offset the curtailment in marketings by those farmers whose production was cut below normal by the weather.

On the basis of figures showing regional receipts from marketings of principal farm products, the greatest improvement in cash income during the first 8 months of 1937 as compared with 1936 occurred in the South Central region, and the smallest gain in the West North Central. In each of the other four regions the 1937 gains in income over the preceding year were about the same as the average for the entire country.

During the first half of 1938 the North Central States will be likely to show an improvement in income over 1937 relatively greater than other regions because of increased marketings of this year's favorable crops. Also returns from livestock marketings during late winter and early spring may be increased, owing to the later movement of livestock into feed lots this year.

The South Central States in the first 8 months of 1937 had relatively the greatest improvement in farm income compared with 1936, chiefly because of larger crops. In the eastern section of this area, income during the remainder of 1937 may be smaller than in 1936, but in the western part increased production of cotton and wheat may more than offset lower price levels.

In the Western States, the relatively large improvement in income during the first 8 months of 1937 is expected to continue throughout the calendar year and into 1938.

In the West North Central States during the first 8 months of 1937, income was about the same, month by month, as in 1936. During the remainder of the year it is probable that income will be somewhat higher than in the same period of 1936. Although the corn crop is expected to be below normal in 1937 in this area, it will be appreciably larger than the short crop in 1936 in most sections. With the expected maintenance of the relatively good prices for livestock and livestock products during the first part of 1938, income from these sources probably will be greater next spring than in the spring of 1937.

In the East North Central States the month-to-month improvement over the preceding year has been less marked since July 1937 and income during the latter part of 1937 may not be much larger than in 1936. As prices of meat animals, dairy products, poultry and eggs in the first half of 1938 are not expected to differ greatly from prices prevailing in the corresponding period of 1937, farm income from these sources during the first 6 months of 1938 will be determined mainly by volume of marketings.

## Farm Family Living - 5

In the North Atlantic region, farm income in the first 8 months followed the same trend as last year but at a slightly higher level. It is expected that this higher income level will continue throughout 1937. Dairy and poultry products are major contributors to farm income in this area. Although no material change in prices for these products is expected in 1938 as compared with 1937, the net income from these enterprises in 1938 probably will be greater than in 1937 because of the material decrease expected in feed-grain prices.

In the South Atlantic States, income during the first 8 months of 1937 was slightly higher than during the corresponding period of 1936. During the last 4 months larger crops (apples and winter wheat) will add materially to the income in the northern section. In the southern section larger returns from tobacco may about offset the smaller income from cotton, thus maintaining income at about the 1936 level.

### Income of farm laborers from agriculture

The foregoing discussion refers to farm operators. Farm laborers, dependent partially or wholly upon wages from agriculture, often dwell in villages or small cities or are migratory workers. No information is available as to the extent to which laborers seasonally employed in agriculture find employment in other occupations during the remainder of the year.

Total earnings of farm laborers in 1937 have increased over those of 1936 to the extent that the larger crops have necessitated more labor. An increase in earnings of farm laborers represents a transfer of purchasing power from the farm operator to the farm wage earner, rather than a change in the total income from agriculture.

The index of farm wage rates has risen 71 percent since the low of 1932. During the same period farm income of operators more than doubled. Farm wage rates in different regions now range from about \$17 to \$46 per month with board, and from about \$24 to \$67 per month without board. Surveys made by the Bureau of Agricultural Economics in 1936 in 10 counties of the country show that the average money earnings of male adult laborers ranged from \$125 to \$347 in the previous 12 months. In some cases food and housing furnished by employers added considerably to money remunerations.

### Other Income from Farm and Nonfarm Sources

The farm family's net cash income from agriculture is supplemented to a greater or lesser extent by income in kind, especially food, and by cash from nonfarm sources, such as earnings of sons and daughters, or rents from property.



Nonmoney income from farming

For the country as a whole, the year 1937 has been favorable to the production of food for family use. However, in some localities drought, grasshopper plagues, or excessive rainfall have interfered with gardens. Production of meat, milk, and eggs for home use may have been below average because of inability fully to replace poultry flocks and meat animals since the enforced liquidations of the drought years of 1934 and 1936. Comparatively high prices of meat in 1937 may have tempted some families to retain fewer animals than usual for home consumption. But the generally favorable outlook for home-produced food from garden and orchard points to an improvement in living levels, not only in the calendar year of 1937 but also in the early months of 1938, in proportion to the quantity and kind of food canned and stored.

When well-planned programs of food production for home use are carried out, the family benefits in two ways: directly, from a better food supply; and indirectly, because cash otherwise needed for food can be released for other purposes. Recognizing this, the Extension Service and the Farm Security Administration have continued to carry on educational programs promoting farm production of food for family use. The Soil Conservation practices carried out under Government auspices have led to some increased use of land for feed crops, and this in turn probably has resulted in increased production of meat, milk, poultry, and eggs for family use.

The average money value of farm-furnished food per family ranged from less than \$100 in one locality to more than \$500 in others, in 1935-36, according to a study made by the Bureau of Home Economics in counties selected to represent specific type-of-farming areas. In the Southeast, the Negro families, although larger than the white, had less farm-furnished food. Sharecroppers, as a rule, had less than operators.

The figures reported in this study for money value of farm-furnished food are higher than some current estimates. This is due in part to the more adequate accounting in this study of the quantities of fruits, vegetables, milk, and other farm products actually consumed by the family, and in part, to the method of evaluation. Prices that would have been paid to neighbors or to other likely sellers for goods of similar quality bought in similar quantity, were applied to quantities estimated to have been consumed. These prices were, of course, somewhat higher than farm prices received for such products from commercial buyers.

Whether the farm family should be encouraged to increase its home-production program depends upon a number of factors, such as whether cash income is high or low, whether the value of land for commercial production is greater than its value for producing the family's food, and upon the buying power of farm products marketed. Since the buying power per unit of farm products is expected to be lower in 1938 than in 1937, many families may find it advantageous to enlarge their home-production programs beyond those of 1937 in order to reduce food purchases.

Money income from nonfarm sources

Comparatively little has been known of the extent to which farm families supplement their income from farming with cash from nonfarm sources. According to the Census, farm operators the country over spent a little more than 200,000,000 days in work off the farm in 1934.

Additional information for certain localities now is available from the previously mentioned study of the Bureau of Home Economics. Figures on 1935-36 incomes of families in 66 counties selected to represent 20 regionalized type-of-farming areas, show that cash income from nonfarm sources was relatively high in the Northeast and on the Pacific Coast, where it amounted to one-eighth or more of total net income (money and nonmoney) and from one-fifth to two-fifths or more of the total net money income. Even in the Middle West, where money income from nonfarm sources was a small percentage of total money and nonmoney income, it formed an appreciable share of the money income - usually from one-eighth to one-sixth. Disregarding figures from the lowest and highest areas, the average nonfarm money income for the middle 10 of the 20 areas studied was in the neighborhood of 20 percent of all net money receipts. Earnings of farm operators from work involving use of teams and farm machinery were excluded from these figures, as were data from part-time farms.

There is some interest in the source of this additional cash. Most of it came from earnings of family members from employment off the farm. Smaller amounts came from interest and dividends, and from renting property. Average net returns to all families from tourists and other roomers or boarders were small, since fewer than one family in 10 had income from this source. However, average returns to the families engaged in keeping roomers and boarders were considerable, amounting, for example, to \$193 per family in the counties studied in New Jersey; \$133 per family in Central California; and \$90 per family in the counties studied in Vermont.

For the country as a whole, during the last 2 years, some earnings of farm family members were made possible because of local W.P.A. projects. In 1936-37, with improved business conditions, opportunities for industrial employment of some farm-family members probably increased over those of the previous year. The extent to which, in 1938, farm families will be able to supplement farm income with earnings off the farm, will depend upon opportunities for outside employment which may be fewer than in the recent past.

Apparently most farm families depend for their livelihood chiefly upon their money income from agriculture and upon the products furnished by their farms. Money income from other sources may be of appreciable assistance. But whether most farm families are poor, moderately well-to-do, or rich will be determined by crops raised, prices received for them, and prices paid for goods and services purchased.

Prices of Goods Purchased by Farm Families

Prices paid for commodities bought for family maintenance have increased considerably since June 1936. The all-commodity index of items purchased for farm family living increased 6.6 percent between June 15, 1936, and June 15, 1937. During the same period the food index increased 8.8 percent; clothing, 6.5; operating expenses, 4.8; furniture and furnishings, 6.0; and building materials, 7.1 percent. On the whole, prices of commodities bought for family living probably will be about the same in the first half of 1938 as in 1937. However, if there should be a marked change in the general price level, it will be reflected in family living costs.

Retail food prices have been declining a little during the last few months and some further decline is probable in 1938. Prices of dairy products and eggs may be expected to rise seasonally until December, followed by a downward seasonal trend in the early part of 1938. Prices of most fruits and vegetables are expected to advance seasonally during the next 6 months. Meat prices are likely to average lower than in 1937 with most of the decline in the better grades of meat. Prices of flour and perhaps of some manufactured cereal products are expected to average somewhat lower next year owing to the abundant grain crops in 1937.

Prices of ready-to-wear clothing, especially for men, have had an upward trend in 1937 and are likely to average higher in 1938 than in 1937. Prices of garments wherein wages constitute a large part of the retail cost will tend to be somewhat higher, but no marked change is expected. Prices for shoes of comparable quality may average somewhat higher in 1938 than in 1937.

Although labor costs in manufacturing plants have risen, prices of yard goods and textile products as a whole may average lower in 1938 than in 1937. Prices of raw cotton have declined sharply and rayon and wool prices may be a little lower in 1938.

Prices of fuel and lighting materials have advanced a little in 1937 and the slight upward trend may continue in 1938 but no marked rise is expected. Prices of petroleum products, especially fuel oil, probably will average a little higher in 1938. No marked change is expected in gasoline prices; the increase in gasoline consumption, if continued, may tend to offset possible lower prices due to technological improvements. Prices of bituminous coal advanced some in the last year and probably will be somewhat higher in 1938.

Automobiles, 1938 models, are higher in price than were those of 1937. Prices of automobile tires and tubes are expected to average the same or a little lower by the end of 1937 but may rise slightly in 1938.

Furniture prices, according to trade sources, may be somewhat higher in the next year. Prices of radios were increased from 10 to 15 percent in August and no significant further change is anticipated soon. Prices of electrical appliances are expected to average a little higher in 1938 than in 1937.



Wholesale prices of building materials and construction costs are considerably higher than a year ago, but they have leveled off in recent months. Retail prices of building materials have lagged behind this rise and therefore may be expected to average higher in 1938 than in 1937.

#### Adjustments in Family Expenditures

The 14-percent increase in agriculture's gross cash income in 1937 over 1936 may mean a somewhat larger percentage increase in cash available to the farm operator and his family. However, this increase in available funds will not be devoted solely to farm family living; investments and payment of debts will claim some share. An increase of as much as 20 percent over 1935-36 in the average amount spent for family living would mean \$83 more per family among those in the typical income class in one of the least well-to-do farm communities included in the Bureau of Home Economics study. In one of the wealthiest communities, it would mean an increase of \$150 in the expenditures of the most typical income group.

Use of additional funds varies, of course, from family to family, depending on customary levels of living, on recent retrenchments or enlargements in budgets, and on other factors. In the face of the family's many unsatisfied desires, it is difficult to forecast adjustments in living expenditures.

However, it seems safe to assume that some of the available income will be devoted to purchases of electric power and equipment. Projects amounting to over \$50,000,000 have been approved by the Rural Electrification Administration, and construction is under way. It is estimated that 1,125,000 farms will be receiving electric service by the end of 1937. Through R.E.A. projects about 150,000 additional farms probably will be served in 1938, and private utilities have lines under construction which will add 75,000 more.

Some indication of how increased funds available for family living in 1937 may be used is given by a comparison of the ways of spending of two typical groups of families whose average expenditures were about \$100 apart in 1935-36. In a general farming area the average distribution of the additional \$100 was found to be as follows: Clothing, \$19; food, \$14; medical care, \$13; automobile, \$11; house operation, \$11; house repair, \$8; furniture and equipment, \$8. The remaining \$16 was allocated to numerous smaller items, including personal care, formal education, reading, recreation, amusements, tobacco, and gifts. In most other localities, food, clothing, and the automobile were the strongest claimants for additional cash, with medical care the next runner-up as families became more well-to-do. These trends give some indication of what use probably will be made of the increased cash for family living in 1937.

Expenditure patterns of farm families today differ considerably from those of the early 1920's. Now as then, food ranks first in order of amount spent. Despite generous supplies from the farm, in 1935-36 average food expenditures of the most usual income class of white farm operators ranged from 27 percent of total living expenses in the South to 41 percent in Vermont. Clothing expenditures used to rank second in importance; now second rank is claimed by automobile expense among half of the most usual income groups. This car expenditure represents only the family's share (usually 50 percent) of total expense for automobile purchase and operation.

This change in the rank of automobile expense is significant for farm family living. It must mean less isolation, more opportunities for social contacts, more group discussions of agricultural problems by farm men and women, more recreation, and, in general, a better rounded, more satisfying life.

Statistical evidence of this new importance of the car in family living also must change our thinking regarding family expenditures and the use we make of such data in determining what the dollar spent for family maintenance will buy. No longer will an index weighted primarily by expenditures for food and clothing serve to indicate the trends in the cost of living of farm families.

Thrift in using what money is available seems to be characteristic of farm families. Families with average net money incomes of \$500 (sometimes with less) managed in half of the areas to have something left for getting ahead financially. As incomes increase, the amounts spent for family maintenance rise, but less rapidly than do incomes. More and more of the net money income goes into debt payments, insurance, improvement of the farm home, and other increases in net worth until in the upper income brackets the family spending more than 60 percent of its net cash for living is the exception rather than the rule.

With incomes available for farm family living for 1938 expected to be a little lower than in 1937, and with prices of goods purchased for farm family living about the same or a little higher, any changes in family spending patterns in 1938 probably will tend toward greater economy.

#### Family Purchasing

With little prospect for increased income for family living in 1938, farm families may be expected to continue their active interest in consumer buying problems. That such interest has been growing among all families -- city, farm, and village -- is evidenced by: Inclusion of discussions of the problems of the consumer buyer in programs of numerous women's clubs and other organizations; the larger number of articles on the subject appearing not only in so-called women's magazines but in trade journals; the wider use of informative labels, both those showing United States Department of Agriculture grades for canned goods, and those of other types; and the growth of consumer cooperatives.



A development of major significance in the consumer buying movement in 1937 has been the increasing recognition of this movement by various business groups. Leading trade papers, advertising agencies, and marketing specialists have commented on the women's requests for more specific buying information. Important distribution concerns have joined with consumers in urging manufacturers to use more informative labels. To care for certain phases of problems of adequate grades and labels for consumption goods, such organizations as the Consumer-Retailer Relations Council and the Advisory Committee on Ultimate Consumer Goods of the American Standards Association have been created.

Study of consumer problems in schools and among adult study groups has increased greatly during the year. Ten State Departments of Education or State Universities are now distributing consumer study outlines. In one State, a special appropriation has been made for the development of this type of education in the public schools.

The growth of cooperative buying associations in the United States continued in 1937. Many farmers' purchasing associations handle some supplies used in family living, although their primary purpose is to buy farm supplies used in production. It is estimated by the Farm Credit Administration that during 1937 approximately 45 percent of these purchasing associations handled petroleum products, including kerosene and gasoline; 23 percent, flour and groceries; 16 percent, general merchandise; 12 percent, coal; and 2 percent, clothing. Interest in cooperative buying bids fair to continue strong in 1938.

Some 200 new associations, primarily engaged in cooperative purchasing, were organized during 1937. These newly organized associations have a membership of approximately 50,000 and increase the total number in such associations to more than 1,000,000. It is estimated that the whole-sale and retail business done by the 2,200 cooperative purchasing associations in 1937 will represent about a 20 percent increase over 1936, and will amount to approximately \$400,000,000. Although this is a small proportion of the total volume of purchasing, the trend is significant.

Use of low-cost credit also will be practiced by thrifty farm families. For those who are eligible to borrow from banks and production credit associations, credit for purchases for farm family living may be included in the regular farm production loan budget, provided the added sum can be repaid out of the farm income. In obtaining credit for farm production or family living (including the purchase of household equipment), worthwhile savings are possible through borrowing on a business basis and buying for cash instead of using so-called "easy credit" payments. Such savings contribute to the net income available for family living and for increasing net worth.

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## THE COTTON OUTLOOK FOR 1938

### Summary

#### World Cotton Supply at New High

World supply of cotton for the 1937-38 season is now (late October) expected to be about 50,800,000 bales. This is 15 percent larger than the record supply of the previous season and 31 percent above the average for the 5 years, 1928-29 to 1932-33. World carry-over on August 1 was slightly less than a year earlier, but production will be much larger than the new high of the previous season.

The world supply of American cotton for the current season is expected to be about 23,600,000 bales which is 22 percent larger than in the previous season, but 10 percent less than the peak supply of 1932-33. The world carry-over of American cotton at the beginning of the season was somewhat less than a year earlier, and the smallest in 7 years. But the 1937 crop of the United States is expected to be nearly 42 percent larger than the preceding crop, and the second largest in history.

The world supply of foreign cotton in 1937-38 is expected to reach a new peak (27,200,000 bales) for the fifth consecutive year and exceed the 5-year (1928-32) average by 65 percent. The increase in the current season's supply of foreign cotton in comparison with 1936-37 is largely the result of the marked increase in Russian, Brazilian, and Chinese growths. The increase over the 5-year average is due to marked increases in those growths as well as material increases in Indian, Egyptian, and miscellaneous growths. Foreign production this season is expected in late October to reach 20,100,000 bales. This would be an increase of 10 percent over the record crop of the previous season and 34 percent over the 5-year average. Such a crop would exceed by 16 percent the large 1937-38 United States production, whereas in the 5 years ended 1932-33 the domestic crop was about one-third larger than that of foreign countries.

The 1938 United States acreage goal under the agricultural conservation program has been set at about 28,000,000 acres. This acreage, with yields equal to the average of the last 4 years, would give a crop of about 6,300,000 bales less than the crop of the current season. Such a domestic production would probably give a somewhat smaller world supply of American cotton next season, despite the prospective marked increase in carry-over on August 1, 1938. World carry-over of foreign cotton at the beginning of the 1938-39 season is also expected to be materially larger than on August 1 this year. The lower prices being received by most foreign producers for their 1937-38 crop, however, may result in a decline in foreign acreage and production in 1938-39.



### World Cotton Consumption Again Increased

Total world mill consumption of cotton for 1936-37 of 31,000,000 bales exceeded the previous year's record high consumption by about 12 percent and was more than one-fourth larger than the average for the 5 years 1928-29 to 1932-33. Total consumption of American cotton of 13,100,000 bales last season was slightly larger than a year earlier but slightly smaller than the 5-year average. The total world mill consumption of foreign cotton during the 12 months ended July 1937 was 18 percent larger than the record high of the previous season and 65 percent above the 1928-29 to 1932-33 average. This marked increase in the consumption of foreign cotton was accompanied by a decline in the foreign consumption of American cotton which in 1936-37 was 15 percent below that of the previous season and 30 percent below the average for the above 5-year period. The increase of about 1,500,000 bales in the consumption of American cotton in the United States in 1936-37, which more than offset the decline in the foreign consumption of American cotton, resulted in a new all-time high consumption in the United States which exceeded the 5-year average by more than one-third.

A decline in the consumption of American cotton during the 1936-37 season took place in practically all foreign countries using significant quantities of American cotton. On the other hand the consumption of foreign cotton showed a significant increase in most of these countries. The decline in the consumption of American cotton and increased use of foreign cotton, resulted in American cotton declining from an average of 41 percent of the total mill consumption of cotton outside the United States in the 5 years 1928-29 to 1932-33 to 23 percent in 1936-37.

Conditions in late October indicate that cotton consumption in the United States during the 1937-38 season will probably be less than the record consumption of the previous season but well above the average for the 5 years ended 1932-33. In most European and in a few other foreign countries it is expected that cotton consumption during the current season will again increase. But in Japan and China military operations and other factors are expected to reduce cotton-mill consumption materially. Increased supplies and lower prices of American cotton relative to other growths in the early part of the current season are favorable to an increase in the proportion of American cotton consumed in foreign countries in 1937-38.

### Cotton Prices and Farm Income

The average price of Middling 7/8-inch cotton in the 10 markets during 1936-37 was more than 1 cent per pound higher than the averages for the previous season and for the 5 years ended July 1933, and higher than the average for any season since 1929-30. These prices declined from a peak of nearly 15 cents toward the end of March 1937 to below 8 cents early in October. Associated with this sharp decline in cotton prices were the prospective increase in the supplies of cotton, declining cotton consumption and increasing stocks of cotton textiles, and marked declines in prices of many other commodities and of securities.

In the 1936-37 marketing season the gross United States farm income from lint cotton amounted to about \$764,000,000. This was an increase of 30 percent over the previous season, was the highest in 7 years, and 80 percent larger than the low of 1932-33, but 7 percent less than the 5-year (1928-29 to 1932-33) average. Including the income from the sale of cotton-seed and Government payments with respect to cotton for cooperating in the adjustment program, the gross farm income from the 1936-37 cotton crop was more than twice as large as 1932-33 and 7 percent larger than the 5-year average. With an increase of 42 percent in the size of the crop, offsetting in large part the decline in prices, total gross farm income from the 1937 crop, including Government loans and payments with respect to cotton, is expected to equal or exceed the income from the 1936 crop.

### Supply

#### World Carry-over Slightly Reduced

The world carry-over of all cotton at the beginning of the 1937-38 season was slightly smaller than a year earlier, the smallest in 7 years, but approximately the same as the 5-year (1928-32) average. A substantial decline in the world carry-over of American cotton during the 1936-37 season was largely offset by an increase in the carry-over of foreign cotton. The decline in the carry-over of American reduced it to the lowest level since August 1930, and 1,400,000 bales below the 5-year average, whereas the carry-over of foreign cotton increased to a new high and was one-fourth larger than the 5-year average. There seems little doubt but that the world carry-over of both American and foreign cotton will be substantially larger on August 1, 1938 than at the beginning of the present season. Stocks of American cotton will probably increase about 4,000,000 or 5,000,000 bales, with foreign growths increasing by a much smaller quantity.

#### Cotton commercial: World carry-over by growths, specified periods

Season	:	:	:	:	:	:	:
beginning	:	Egyptian	:	Indian	:	Sundry	:
August 1	:	:	:	growths	:	foreign:	:
	:	Million	:	Million	:	Million	:
Average	:	bales 1/	:	bales 1/	:	bales 1/	:
1928-29 to	:	:	:	:	:	:	:
1932-33	:	1.2	:	2.5	:	1.8	:
	:	:	:	:	:	:	:
1932-33	:	1.4	:	1.9	:	1.7	:
1933-34	:	1.1	:	2.5	:	1.7	:
1934-35	:	1.1	:	3.3	:	2.4	:
1935-36	:	.8	:	2.5	:	2.6	:
1936-37	:	.8	:	2.3	:	3.1	:
1937-38	:	.7	:	3.1	:	3.3	:
1937-38 as	:	Percent	:	Percent	:	Percent	:
percentage	:	:	:	:	:	:	:
of average	:	58.3	:	124.0	:	163.3	:
	:	:	:	:	:	:	:
	:	126.8	:	81.6	:	100.8	:

Compiled from reports of the New York Cotton Exchange Service.

1/ American in running bales (counting round as half bales) and foreign in bales of approximately 478 pounds net.

World Production Greatly Increased

The world production of commercial cotton, for the current season which is expected in late October to be about 37,450,000 bales is about 22 percent larger than the previous high of 1936-37 and 47 percent above the 5-year (1928-32) average. About three-fourths of the increase in comparison with last season is accounted for by an increase of 5,000,000 bales in the United States crop, whereas 77 percent of the increase in comparison with the 5-year average is accounted for by the marked increase in foreign production.

The 1937 domestic crop, which according to the October 8 estimate was 17,600,000 bales of 478 pounds net (equivalent to about 17,400,000 running bales, including an allowance for city crop), is 42 percent larger than that of 1936, and the second largest crop in history. The marked increase in the current American crop is accounted for chiefly by the unusually large yields per acre. Although the 1937 acreage is now estimated to be about 12 percent larger than that of 1936, it is 17 percent less than the 5-year average. Average yields per acre for the United States of 249 pounds as estimated in October is 43 percent above the 5-year (1928-32) average. The indicated yield per acre for the current crop is by far the highest on record. The indicated yield in every cotton-producing State is materially above the 5-year average. Very favorable growing conditions throughout the Cotton Belt is one of the most important factors accounting for the unusually high indicated average yields in 1937. In addition, improved cultural practices, the use of the more productive land, and soil maintenance and soil-building practices under the soil conservation program have no doubt contributed to increased yields during recent years.

Cotton commercial: World production by growths, specified periods

Season begin- ning August 1:	Egyptian	Indian	Sundry	Total			All
	Million	Million	Growths	foreign	American	Million	kinds
5-year aver. 1928-29 to	bales 1/	bales 1/	bales 1/	bales 1/	bales 1/	bales 1/	bales 1/
1932-33	1.5	4.3	5.0	10.9	14.6	25.5	
1932-33	1.0	4.1	5.4	10.5	13.0	23.5	
1933-34	1.7	4.8	6.9	13.4	12.7	26.1	
1934-35	1.5	4.2	7.8	13.5	9.6	23.1	
1935-36	1.8	5.3	8.7	15.8	10.5	26.3	
1936-37	1.9	5.7	10.7	18.3	12.4	30.7	
1937-38	2.3	5.7	12.1	20.1	17.4	37.5	
1937-38 as percentage	Percent	Percent	Percent	Percent	Percent	Percent	Percent
of average	153.3	132.6	242.0	184.4	119.2	147.1	

Compiled from reports of the New York Cotton Exchange Service

1/ American in running bales (counting round as half bales) and foreign in bales of approximately 478 pounds net.



The production of commercial cotton in foreign countries in 1937-38 is expected ( in late October) to total about 20,100,000 bales of 478 pounds net. This is approximately 1,800,000 bales larger than the previous crop which was the record high up to that time, and is about 9,200,000 bales or 84 percent larger than the 1928-32 average. The increase in the prospective current crop in comparison with the 1936-37 production is largely accounted for by increased production in China, Russia, Brazil, and a number of the minor producing countries. These same countries accounted for a large proportion of the increase over the 5-year average although the present estimate of the Indian crop is nearly 1,400,000 bales or 33 percent larger than the 5-year average and the Egyptian crop 800,000 bales or 53 percent larger than the 5-year average. Since 1932-33 the total production of commercial cotton in foreign countries has increased 9,600,000 bales or 91 percent. During this 5-year period, 1932-33 to 1937-38, the production of commercial cotton in foreign countries has increased at a rate of nearly 2,000,000 bales per year, whereas during the preceding 10 years the annual rate of increase was 300,000 bales and in the 25 years ending with 1932-33 was less than 200,000 bales.

The 1938 United States cotton acreage goal under the agricultural conservation program, as announced in late October, was set at 27,000,000 to 29,000,000 acres. These acreages are 14 to 20 percent less than the 1937 estimated harvested acreage and 20 to 37 percent less than the 5-year (1928-32) average. With such an acreage in 1938 and with yield per acre equivalent to the average for the 4 years ended 1936 the production in 1938 would amount to about 10,300,000 to 11,600,000 bales. If, on the other hand, yields should be equal to the average for the 1928-32 period, the production would total about 9,800,000 to 10,600,000 bales.

The outlook with respect to cotton production in foreign countries is quite uncertain. The marked reduction in prices being received for the current crop in most countries and the accumulation of unsold cotton in the hands of producers in some foreign countries, however, may result in some reduction in the 1938-39 foreign acreage and production. This seems probable despite any influence which the 1938 agricultural conservation program calling for a reduction in cotton acreage in the United States may have on production plans in foreign countries.

#### World Supply Largest in History

Despite the smallest world carry-over in 7-years, a large indicated foreign and domestic production is expected in late October to result in a world supply of all commercial cotton for the 1937-38 season of 50,800,000 bales. This is 6,500,000 bales or 15 percent larger than the record supply of the previous season and 12,100,000 bales or 31 percent larger than the 5-year (1928-32) average. The increase over 1936-37 is largely accounted for by the increased supply of American, while the increase in comparison with the 5-year average is almost entirely accounted for by the larger supply of foreign growths.

## Cotton commercial: World supply by growths, specified periods

Season	:	:	:	:	:	:	:
beginning	:	Egyptian	:	Indian	:	Sundry	:
August 1	:	:	:	:	:	grows	:
	:	Million	:	Million	:	Million	:
5-year average:	:	bales 1/	:	bales 1/	:	bales 1/	:
1928-29 to	:	:	:	:	:	:	:
1932-33	:	2.7	:	6.7	:	6.9	:
	:	:	:	:	:	:	:
1932-33	:	2.5	:	6.0	:	7.1	:
1933-34	:	2.8	:	7.4	:	8.5	:
1934-35	:	2.6	:	7.5	:	10.2	:
1935-36	:	2.6	:	7.8	:	11.5	:
1936-37	:	2.7	:	8.5	:	13.8	:
1937-38	:	3.0	:	8.8	:	15.4	:
1937-38 as	:	Percent	:	Percent	:	Percent	:
percentage of	:	:	:	:	:	:	:
average	:	111.1	:	131.4	:	223.2	:

Compiled from reports of the New York Cotton Exchange Service.

1/ American in running bales (counting round as half bales) and foreign bales of approximately 478 pounds net.

The world supply of American cotton for the current season is estimated at 23,600,000 bales. This is 4,200,000 bales or 22 percent larger than 1936-37 and 6 percent larger than the 5-year average, but 2,600,000 bales smaller than the peak of 1932-33. On the basis of October crop prospects the commercial supply of foreign cotton is estimated at 27,200,000 bales which is 2,200,000 bales larger than the record supply of the previous season and 10,700,000 bales or 65 percent larger than the 5-year (1928-32) average.

In view of the prospective increase in the world carry-over of both American and foreign cotton, the 1938-39 world supply of cotton will be larger than in the current season unless the 1938-39 world production of commercial cotton is materially reduced. If the 1938 domestic cotton acreage is no larger than the goal announced in October by the Agricultural Adjustment Administration, and if yields are about equal to the average for the last 4 years, the 1938-39 world supply of American cotton seems likely to be somewhat less than for the current season. With a substantial increase in the carry-over of foreign cotton in prospect, the supply of foreign cotton for the 1938-39 season is expected to be about the same as that for the current season.

ConsumptionWorld Mill Consumption Again Increases to New High

Total world mill consumption of cotton in 1936-37 amounted to 31,000,000 bales and exceeded the previous year's record consumption by about 12 percent and was 28 percent larger than the average for the 5 years ended with 1932-33. World consumption of 13,093,000 bales of American cotton was 5 percent larger than a year earlier but a little less than the 5-year average. In the United States, consumption of American cotton increased 1,500,000 bales or 25 percent over the previous year but in foreign countries consumption of American decreased nearly 1,000,000 bales or 15 percent. World consumption of cotton other than American in 1936-37 increased 2,700,000 bales or 18 percent and was 65 percent larger than the 5-year average. About 80 percent of the increase of 7,000,000 bales in the consumption of foreign cotton in 1936-37 over the 5-year average was accounted for by sundries, particularly Brazilian, Russian, and Chinese but substantial increases also occurred in consumption of Indian and Egyptian.

Total cotton consumption, both in the United States and in foreign countries, was larger during 1936-37 than in any other year. Utilization of rayon yarn and rayon-staple fiber also established new highs in this country and abroad. The increase in industrial production during the year was substantial in most countries but indexes of textile manufacturing for the most part averaged higher than those for general business activity. On the basis of present conditions, mill activity in the United States, Japan, and China is expected to decrease in 1937-38. On the other hand, increases are anticipated in Europe, India, and possibly in a few other countries, and the expectations are that the world consumption of cotton will not be much, if any, smaller in 1937-38 than the record consumption in 1936-37. Consumption of American cotton in Europe and a few other countries is expected to increase as a result of increased supplies and lower prices of American relative to other growths, increased exports of cotton textiles to markets formerly supplied by Japan, and possibly some increases in textile buying in European markets.

## Cotton: Mill Consumption in the world

Season :	::			::			::		
begin- :	United States			Foreign countries			World		
ning :	::			::			::		
Aug. 1 :	American	Foreign	Total	American	Foreign	Total	American	Foreign	Total
:	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>
Average :	bales	bales	bales	bales	bales	bales	bales	bales	bales
1928-29 :	<u>1/</u>	<u>1/</u>	<u>1/</u>	<u>1/</u>	<u>1/</u>	<u>1/</u>	<u>1/</u>	<u>1/</u>	<u>1/</u>
to :	:	:	:	:	:	:	:	:	:
1932-33:	5,683:	210:	5,893:	7,560:	10,672:	18,232:	13,243:	10,882:	24,125
:	:	:	:	:	:	:	:	:	:
1932-33:	6,004:	133:	6,137:	8,381:	10,133:	18,514:	14,385:	10,266:	24,651
1933-34:	5,553:	147:	5,700:	8,227:	11,675:	19,902:	13,780:	11,822:	25,602
1934-35:	5,241:	120:	5,361:	5,965:	14,162:	20,127:	11,206:	14,282:	25,488
1935-36:	6,221:	130:	6,351:	6,282:	15,075:	21,357:	12,503:	15,205:	27,708
1936-37:	7,768:	182:	7,950:	5,325:	17,716:	23,041:	13,093:	17,898:	30,991
Percentage of 5-year average (1928-29 - 1932-33)									
1936-37	136.7:	86.7:	134.9:	70.4:	166.0:	126.4:	98.9:	164.5:	128.5

Bureau of Agricultural Economics. Compiled from reports of the New York Cotton Exchange Service.

1/ American cotton in running bales and foreign in equivalent bales of 478 pounds net weight.



In the United States and Japan, however, a considerable decrease is expected, despite the lower level of cotton prices, and the probabilities are that world consumption of American in 1937-38 will be about the same or somewhat smaller than in the previous year.

#### United States Consumption Largest in History

The record cotton consumption of 7,950,000 bales in the United States in 1936-37 was 25 percent more than in the previous year and 35 percent more than the average for the 5 years ended with 1932-33. The increase over the previous season resulted largely from improved business conditions and increased consumer textile buying. But stocks of finished and unfinished cotton goods accumulated in substantial volume in channels of distribution and in mill warehouses during the latter part of the 1936-37 season. Mill activity for the first 2 months of the current season was about the same as the rate for the corresponding period last season but considerably above the 5-year average. The volume of cloth and yarn production, however, was much larger than sales by mills and unsold stocks of cloth are substantially larger than in early October a year ago. On the basis of present conditions, it is expected that mill consumption in the United States in 1937-38 will be materially less than the record consumption for 1936-37 but well above that for 1935-36 and the 5-year average.

#### Foreign Consumption at Record High

Total mill consumption in foreign countries of 23,000,000 bales in 1936-37 was 8 percent more than in the previous season and 26 percent more than the average for the 5 years ended with 1932-33. Consumption of American cotton outside the United States last season was 15 percent smaller than in the previous year and 30 percent less than the 5-year average. Total consumption of cotton other than American in these countries was 18 percent larger than in the previous season and 66 percent more than the 5-year average. In 1936-37, American cotton comprised only 23 percent of the total consumption of cotton outside the United States, against 29 percent in the previous year and 41 percent during the 5-year period 1928-32. Increased supplies of foreign cotton and decreased supplies of American accounted in large part for these decreases in the consumption of American and increases in that of foreign cotton during recent years, although in some countries trade restrictions apparently have reduced imports of American cotton more than those of other growths. Despite trade restrictions and the substitution of rayon and other fibers for cotton in foreign countries, total consumption increased substantially. In 1937-38 the total consumption in countries outside the United States is expected to be about the same or slightly smaller than in the previous year. The increased supply of American cotton in prospect for 1937-38 and the smaller increase in supplies of foreign cotton are favorable to an increase in the foreign consumption of American cotton relative to other growths, unless exports are checked by the placing of a large volume of cotton under Government loans in this country.

## Cotton: Mill consumption in principal foreign regions

Season :	Europe			Orient			Elsewhere		
begin- ning :									
Aug. 1 :	American	Foreign	Total	American	Foreign	Total	American	Foreign	Total
1 :	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Average :	bales	bales	bales	bales	bales	bales	bales	bales	bales
1928-29 :	1/	1/	1/	1/	1/	1/	1/	1/	1/
to :									
1932-33 :	5,394	4,563	9,957	1,942	5,353	7,295	224	756	980
1932-33 :	5,444	4,290	9,734	2,701	5,169	7,870	236	674	910
1933-34 :	5,633	5,043	10,676	2,321	5,779	8,100	273	853	1,126
1934-35 :	3,680	6,055	9,735	2,032	7,009	9,041	253	1,098	1,351
1935-36 :	4,258	6,708	10,966	1,757	7,264	9,021	267	1,103	1,370
1936-37 :	3,596	7,944	11,540	1,420	8,593	10,013	309	1,179	1,488
Percentage of 5-year average (1928-29 = 1932-33)									
1936-37 :	66.7	174.1	115.9	73.1	160.5	137.3	137.9	156.0	151.8

Bureau of Agricultural Economics. Compiled from reports of the New York Cotton Exchange Service.

1/ American cotton in running bales and foreign in equivalent bales of 478 pounds net weight.

Europe.— Total consumption of cotton in Europe during 1936-37 was 11,540,000 bales or slightly more than the increased consumption for the previous year and about 16 percent more than the average for the 5 years ended with 1932-33. Consumption of American cotton declined about 16 percent from the increased consumption in the previous year and was 33 percent less than the 5-year average. But consumption of foreign cotton continued to increase and was 74 percent above average. The small increase in total European consumption in 1936-37 resulted from the continued increases in mill activity in the United Kingdom, France, and in a few other countries, but consumption in Germany and Poland declined considerably. Prospects in late October are that the total European consumption of cotton during 1937-38 will be maintained or increased and that the consumption of American probably will increase.

In the United Kingdom, total consumption of 3,040,000 bales in 1936-37 increased 7 percent but consumption of American declined somewhat, following the rather sharp increase in the previous year. American cotton amounted to 38 percent of the total in 1936-37, against 46 percent in the previous year and 55 percent for the 5-year average. The increase in cotton consumption in 1936-37 resulted from an increased domestic buying and a moderate expansion in exports of cotton textiles. Prospects are that general business conditions in the United Kingdom will continue favorable during 1937-38 and that this will sustain domestic textile buying. In addition, present indications point to a volume of cotton-textile exports somewhat above that for 1936-37, particularly if textile exports from Japan decrease, as now appears probable.

## Cotton: Mill consumption in Europe

Season :				::				::			
begin- : ning :	United Kingdom			::	Continent			::	Continent excluding Russia		
Aug. 1 :	American:	Foreign:	Total	::	American:	Foreign:	Total	::	American:	Foreign:	Total
	: 1,000	: 1,000	: 1,000	::	: 1,000	: 1,000	: 1,000	::	: 1,000	: 1,000	: 1,000
Average:	<u>bales</u>	<u>bales</u>	<u>bales</u>	::	<u>bales</u>	<u>bales</u>	<u>bales</u>	::	<u>bales</u>	<u>bales</u>	<u>bales</u>
1928-29:	<u>1/</u>	<u>1/</u>	<u>1/</u>	::	<u>1/</u>	<u>1/</u>	<u>1/</u>	::	<u>1/</u>	<u>1/</u>	<u>1/</u>
to :	:	:	:	::	:	:	:	::	:	:	:
1932-33:	1,392	1,138	2,530	::	4,002	3,425	7,427	::	3,850	1,813	5,663
:	:	:	:	::	:	:	:	::	:	:	:
1932-33:	1,365	1,027	2,392	::	4,079	3,263	7,342	::	4,079	1,425	5,504
1933-34:	1,403	1,256	2,659	::	4,230	3,787	8,017	::	4,150	1,902	6,052
1934-35:	941	1,650	2,591	::	2,739	4,405	7,144	::	2,704	2,556	5,260
1935-36:	1,295	1,541	2,836	::	2,963	5,167	8,130	::	2,874	2,905	5,779
1936-37:	<u>1,150</u>	<u>1,887</u>	<u>3,037</u>	::	<u>2,446</u>	<u>6,057</u>	<u>8,503</u>	::	<u>2,446</u>	<u>2,909</u>	<u>5,355</u>
Percentage of 5-year average (1928-29 - 1932-33)											

1936-37: 82.6 : 165.8 : 120.0 :: 61.1 : 176.8 : 114.5 :: 63.5 : 160.4 : 94.6  
Bureau of Agricultural Economics. Compiled from reports of the New York Cotton Exchange Service.

1/ American cotton in running bales and foreign in equivalent bales of 478 pounds net weight.

Total mill consumption of 8,500,000 bales on the Continent increased in 1936-37 but consumption of American cotton was smaller than in the previous year and about 39 percent less than the 5-year average. Consumption of foreign cotton increased substantially and was 2,600,000 bales or 77 percent larger than the 5-year average. Cotton consumed on the Continent of Europe, except in Russia, is practically all imported. On the Continent, excluding Russia, American cotton was 46 percent of the total last year as compared with 50 percent in 1935-36 and 68 percent during the 5 years ended with 1932-33. Consumption of cotton other than American increased sharply despite the substantial increase in consumption of rayon and various other textile raw materials. Increased supplies of foreign cotton and decreased supplies of American appeared to be primarily responsible for the displacement of American by other growths during recent years on the Continent of Europe. In addition, however, special trade arrangements between certain importing countries and a few foreign cotton-producing countries apparently tended to increase the use of foreign cotton relative to American cotton in these importing countries. General business conditions on the Continent and the outlook for textile exports indicate that the total consumption will be somewhat larger in 1937-38 than in the previous year, with prospects for an increase in the proportion of American.

The Orient.- Mill consumption of all kinds of cotton in the Orient increased about 10 percent during 1936-37 as compared with the previous year and was about 37 percent larger than the average for the 5 years ended with 1932-33. Consumption of American cotton, on the other hand, decreased 19 percent last season and was 27 percent smaller than the 5-year average. Consumption of foreign cotton has increased every year since 1932-33 and in 1936-37 was 61 percent larger than the 5-year average. Most of the American cotton consumed in the Orient is utilized in Japanese mills as those in China and India use native cotton almost exclusively. Formerly China imported considerable quantities of cotton from the United States but India has never consumed much American cotton. Unsettled



## Cotton: Mill consumption in the Orient

Season :	Japan			::	China			::	India		
begin- ning :				::				::			
Aug. 1 :	American	Foreign	Total	::	American	Foreign	Total	::	American	Foreign	Total
:	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	::	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	::	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>
Average :	<u>bales</u>	<u>bales</u>	<u>bales</u>	::	<u>bales</u>	<u>bales</u>	<u>bales</u>	::	<u>bales</u>	<u>bales</u>	<u>bales</u>
1928-29 :	<u>1/</u>	<u>1/</u>	<u>1/</u>	::	<u>1/</u>	<u>1/</u>	<u>1/</u>	::	<u>1/</u>	<u>1/</u>	<u>1/</u>
to :				::				::			
1932-33 :	1,345	1,418	2,763	::	518	1,760	2,278	::	80	1,953	2,033
1932-33 :	1,847	1,087	2,934	::	748	1,827	2,575	::	106	2,104	2,210
1933-34 :	1,857	1,433	3,289	::	423	1,981	2,404	::	41	2,055	2,096
1934-35 :	1,737	1,911	3,648	::	247	2,311	2,558	::	39	2,388	2,427
1935-36 :	1,619	1,930	3,549	::	83	2,358	2,441	::	34	2,454	2,488
1936-37 :	1,367	2,562	3,929	::	21	3,039	3,060	::	13	2,450	2,463
Percentage of 5-year average (1928-29 .. 1932-33)											
1936-37 :	101.6	180.7	142.2	::	4.0	172.7	154.3	::	16.2	125.4	121.2

Bureau of Agricultural Economics. Compiled from reports of the New York Cotton Exchange Service.

1/ American cotton in running bales and foreign in equivalent bales of 478 pounds net weight.

conditions in the Orient make the outlook for 1937-38 very uncertain but most indications point to a substantial decrease in total consumption and to a material reduction in the consumption of American as compared with the previous year. In Japan, total consumption is expected to decline considerably, largely as a result of reduced cotton-textile exports. Any decrease in cotton consumption in Japan resulting from decreased exports of cotton textiles will tend to stimulate cotton consumption and cotton-textile exports from Europe and possibly elsewhere. Total cotton consumption in China is expected to be materially lower than in the previous season but the upward trend in the consumption of cotton in India is expected to continue, especially if imports of cotton cloth from Japan should decrease materially.

In Japan, total consumption of 3,900,000 bales in 1936-37 was a new high, following a slight recession in the previous year, and was about 42 percent larger than the average for the 5 years ended with 1932-33. Consumption of American cotton decreased in 1936-37 for the third consecutive time and represented only 35 percent of total consumption, compared with 49 percent in the 5-year period. Indian cotton is still the principal competitor of American cotton in Japan but imports of sundries cotton have increased substantially in recent years, comprising 14 percent of the total in 1936-37, against 7 percent during the 5 years ended with 1928-32. Early-season indications are that despite the lower level of cotton prices and comparatively large stocks of cotton in Japan, total consumption is likely to decrease materially. Japanese exports of cotton textiles, which constitute more than half of their total requirements for raw cotton, now (late October) appear likely to decline in 1937-38, but the Japanese loss in foreign textile markets will probably result in gains by other textile exporting countries which consume considerable American cotton.

In China, consumption of 21,000 bales of American cotton in 1936-37 compared with an average of 520,000 bales in the 5 years ended with 1932-33. This decrease is due to a considerable extent to increased production of Chinese cotton. Current estimates indicate another increase in the Chinese cotton crop for 1937-38 but consumption in areas where about two-thirds of the manufacturing capacity of Chinese mills is located practically ceased during August and September. Activity has apparently been resumed in some of these mills but some have been completely destroyed. With prospects for supplies of Chinese cotton much above Chinese requirements for the 1937-38 season, a substantial increase in exports to Japan and other cotton-consuming countries may occur if facilities are available for shipment out of China.

In India, the indications are that total mill consumption may continue to increase during 1937-38. Imports of cotton cloth, principally from Japan and the United Kingdom, were about one-third smaller in 1936-37 than in the previous year and about 40 percent smaller than the 5-year average.

Other countries.- Foreign countries outside Europe and the Orient consumed considerably more cotton in 1936-37 than in the previous year and nearly 52 percent more than the average for the 5 years ended with 1932-33. Consumption of American cotton during 1936-37, most of which was in Canada, continued to increase and was 38 percent larger than the 5-year average. Consumption of cotton other than American also increased and was about 56 percent larger than average. Increases in consumption of native cotton in Brazil, Mexico, and the less important cotton-producing countries in North and South America account for most of the increase in the consumption of cotton other than American in these countries, over the 5-year average.

Prices and Income

The average price of Middling 7/8-inch cotton in the 10 designated markets was 1.15 cents per pound higher in 1936-37 than in the previous season, the highest seasonal average since 1929-30, and 1.28 cents higher than the 5-year (1928-32) average. The 10-market average price of Middling 7/8-inch cotton declined from a peak of nearly 15 cents a pound toward the end of March to below 3 cents early in October. Associated with this sharp decline in cotton prices were substantial increases in the prospective supplies of both American and foreign-grown cottons, increases in stocks of cotton textiles and reductions in cotton-mill activity, particularly in the United States and in the Orient, and marked declines in prices of many other raw materials and securities. During the first 2 months of the current season, prices in the 10 markets averaged 2.58 cents lower than in the corresponding period a year ago, and the average price of 3.25 cents during the week ended October 23 was 3.79 cents lower than a year earlier.

The weighted-average price received by producers during the 1936-37 season of approximately 12.3 cents was 1.2 cents more than for the previous season and 1 cent above the 5-year (1928-32) average. With an increase of about 17 percent in the size of the crop and 11 percent in prices to growers, the gross income from the sale of cotton during the 1936-37 season was 30 percent larger than in the previous season and the largest since 1929-30, but 7 percent smaller than the average for the 5 years ended with the season 1932-33.

The combined income to cotton producers from cotton and cottonseed, together with Government payments with respect to cotton in 1936-37, was 15 percent larger than in the previous season, more than twice as large as in 1932-33, and about 7 percent larger than the average for the 5 years ended with 1932-33. Excluding Government payments, the gross farm income from last year's crop was 30 percent above that for the 1935 crop, 95 percent higher than the low income from the 1932 crop, and only slightly below the 5-year (1928-32) average. When adjusted for changes in the prices of things farmers buy, the gross farm income from cotton and cottonseed in 1936-37, including Government payments, was about 3 percent above that of the previous season, 63 percent above the low income of 1932-33, and 14 percent above that for the 5-year average. With an increase of about 42 percent in production, gross farm income from the 1937 domestic crop, including Government loans and price adjustment and conservation payments with respect to cotton, is expected to equal or exceed that from the 1936 crop, despite the substantial reduction in prices.



## Cotton: Domestic prices and income, specified periods

Cotton: Domestic prices and income, specified periods								
-----								
: Spot prices of lint: Gross income received by producers from:--								
: : : : : : Total, including Government								
Season : Weighted : Average : : : : : payments								
beginning : average : for 10 : Cotton: Cotton: Govern-: : Adjusted to the								
August 1 : received : desig- : lint : seed : ment : Actual : 1910-14 level								
: by : nated : : : : payments : of prices paid								
: producers: markets : : : : : : by farmers								
-----								
Average : Cents per: Cents per: Million: Million: Million: Million: : Million								
1928-29 to : pound : pound : dollars: dollars: dollars: dollars: : dollars								
-----								
1932-33	: 11.3	: 11.42	: 822.7	: 97.6	: ---	: 920.3	: 668.2	
1932-33	: 6.5	: 7.15	: 424.0	: 40.3	: ---	: 464.3	: 450.8	
1933-34	: 10.2	: 10.81	: 663.5	: 53.0	: 179.6	: 896.1	: 759.4	
1934-35	: 12.4	: 12.36	: 595.6	: 111.4	: 115.2	: 822.2	: 652.6	
1935-36	: 11.1	: 11.55	: 590.1	: 107.7	: 160.1	: 858.0	: 703.3	
1936-37	: 12.3	: 12.70	: 764.4	: 140.6	: 82.2	: 937.1	: 759.3	
1937-38 2/ 3/	: 9.8	: 9.48	:	:	:	:	:	
: Percent : Percent : Percent: Percent: Percent: Percent: : Percent								
-----								
1936-37 as								
percentage:	103.8	: 111.2	: 92.9	: 144.1	: ---	: 107.3	: 113.6	
of average:								
-----								

1/ Includes price adjustment payments amounting to \$39,800,000.

2/ Average of August and September.

3/ Simple average of August 15 and September 15 average prices.

The loan plan as announced by the Commodity Credit Corporation on August 30 and modified on October 4, provides for loans to producers of the 1937 crop of 9 cents per pound for Middling and better in grade of staples not shorter than 7/8 inch, and specified smaller loans for the lower grades and/or shorter staples. Should the proportion of the various grades and staples for the 1937 crop be approximately the same as for the 1936 crop, the qualities specified as being eligible for loans would include about 95 percent of the crop. But only growers who agree to cooperate in the 1938 Agricultural Adjustment Program to be established by new farm legislation can secure these loans on their cotton even though it may be of eligible quality. Provisions were also made for price-adjustment payments on the 1937 crop equal to the difference between 12 cents per pound and the average price of Middling 7/8-inch cotton in the 10 designated markets on the day of sale, but not to exceed 3 cents per pound. Provisions in the announcement made in August limited these payments to 65 percent of each producer's 1937 base production and not to exceed the 1937 production. Such payments are to be contingent upon proof of compliance with the 1938 agricultural program to be enacted, and of the sale of the cotton prior to July 1, 1938.

The Commodity Credit Corporation reported that up through October 26, a total of about 1,000,000 bales were reported pledged on these Government loans. Conditions in late October indicate that the availability of these loans will reduce considerably the supply of American cotton immediately available in the markets.

Prices of Indian and Egyptian cotton continued to advance in relation to prices of American in Liverpool and in 1936-37 averaged relatively higher than during the 5 years ended with 1932-33. During the first 2 months of the current season Liverpool prices of American cotton were lower in relation to prices of Indian and Egyptian cotton than during the 1936-37 season, and were more favorable to the consumption of American cotton than in the corresponding period in any other year since 1926-27.

## Cotton: Spot price per pound of specified growths at Liverpool

Season beginning August 1	Actual prices of spot cotton				As a percentage of		
	American: Middling	Indian: Average	Egyptian: Uppers	Brazilian: Sao Paulo	American Middling		
	7/8 inch	of 3 types	F.G.F.	Fair	Indian	Egyptian	Brazilian
					1/		
Average	Cents	Cents	Cents	Cents	Percent	Percent	Percent
1928-29 to							
1932-33	13.49	10.04	15.86	13.08	79.0	118.9	97.7
1932-33	8.52	7.14	10.61	8.61	86.7	125.2	101.0
1933-34	12.47	8.87	13.77	12.28	74.0	110.8	98.8
1934-35	14.24	10.02	15.49	13.86	72.3	108.8	97.4
1935-36	13.50	10.36	15.49	13.45	79.5	114.8	99.8
1936-37	14.62	11.07	17.40	14.12	79.8	119.0	96.6
1937-38 2/	11.64	9.26	16.08	11.33	85.4	138.0	97.4
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
1937-38 as percentage of average	86.3	92.2	101.4	86.6	108.1	116.1	99.7
1/ As a percentage of American Middling and Low Middling.							
2/ Average of August and September.							

Changes in the relative quantities of American and foreign cotton available in world channels from one season to another tend to result in material changes in the comparative prices of these growths, especially if these growths differ materially in quality. But as prices of cotton of one growth increase or decrease in relation to prices of other growths, the consumption of the relatively cheap cotton tends to increase in relation to the total consumed. Such shifts in consumption tend to readjust the comparative prices of these growths in line with the differences in quality or spinning utility. As a result, over a period of years, the proportion of the total cotton consumed of a given growth varies directly with the ratio of the supply of that growth to the total supply even though the price of it shows little or no net change relative to the prices of cottons of other growths.

In other words, over short, season-to-season periods, substantial changes in the relative supplies of cotton of different growths, particularly when materially dissimilar in quality, tend to result in changes in their comparative prices; but over longer periods adjustments are made in consumption, so that the relative amounts of the various growths consumed become adjusted to the total supply of each. Hence, over periods of time long enough to allow these adjustments, the relative quantities of American and foreign cotton consumed depend on amounts available, and the price differentials depend on differences in spinning

utility. This is true not only of cottons of different growths insofar as they represent differences in quality, but also of cottons of different quality (or spinning utility) in the American crop and in the crop of any other country.

### Staple Situation

The increase in total world supply of cotton in the 1937-38 season apparently will be relatively greater for the short and medium staples than for the long staples. The domestic supply of American Upland cotton of staples shorter than 7/8 inch in 1937-38 apparently will be about 35 percent larger than in the previous season, and about 14 percent larger than the average for the 5 years ended with 1932-33. This increase in supply of short-staple American cotton, along with a substantial increase in the supply of Indian and Chinese cottons, most of which is of staples shorter than 7/8 inch, gives an unusually large total world supply of short-staple cotton. The indicated supply of the medium staple (7/8 to 1-3/32 inches, inclusive) American Upland cotton showed an increase of 27 percent over that of the previous season, and 15 percent over the average for the 5 years ended with 1932-33. In addition, substantial increases in cotton production in 1937-38 are indicated in Brazil, Russia, and other countries where considerable quantities of the medium staples are produced. The indicated supply of long-staple (1-1/8 inches and longer) American cotton for the season 1937-38 apparently will be somewhat less than in the previous season and less than the 5-year (1928-32) average, but an increase is indicated in the 1937-38 crop in Egypt, Peru, and other countries which produce substantial quantities of long-staple cotton, with the result that the total world supply of long staples probably will be somewhat greater than in the previous season.

Cotton: Domestic supply 1/ by staple lengths of American upland

Year	Staple length (inches)						
	Shorter than 7/8	7/8 and 29/32	15/16 and 31/32	1 and 1-1/32	1-1/16 and 1-3/32	1-1/8 and 1-5/32	1-3/16 and longer
beginning August 1	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Average 1928-29 to 1932-33	2,026	7,349	4,692	2,744	1,342	842	305
1932-33	1,136	8,179	6,375	3,480	1,626	1,169	297
1933-34	723	6,990	6,197	3,795	1,492	1,204	320
1934-35	1,017	6,017	4,168	2,394	1,503	1,233	278
1935-36	1,843	6,004	4,434	2,679	1,399	906	264
1936-37	1,713	5,432	3,876	3,464	1,780	923	266
1937-38 <u>2/</u>	<u>2,310</u>	<u>6,772</u>	<u>5,617</u>	<u>4,260</u>	<u>1,823</u>	<u>914</u>	<u>235</u>
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
1937-38 as percentage of average	114	92	120	155	136	109	77

1/ Carry-over plus estimated production.

2/ Preliminary estimate, based on information available in early October.



## Cotton: Staple premiums and discounts from prices of 7/8 inch

Year	Disc. 1/	Prices :	Premiums 3/						
beginning	for	of Mid.:	15/16 :	1	1-1/16:	1-1/8 :	1-3/16 :	1-1/4	
August 1	13/16 in.:	7/8 2/:							
Average	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
1928-29 to:									
1932-33	0.52	11.42	0.34	0.83	1.39	1.88	2.87	5.82	
1932-33	.21	7.15	.12	.38	.73	1.06	2.01	4.25	
1933-34	.23	10.81	.22	.62	1.10	1.55	2.69	5.12	
1934-35	.36	12.36	.32	.81	1.15	1.40	2.36	4.79	
1935-36	.39	11.55	.36	.85	1.21	1.68	2.51	4.60	
1936-37	.84	12.70	.67	1.36	2.00	3.36	4.34	5.54	
1937-38 4/:	1.24	2.42	.50	.95	1.40	2.46	3.47	5.30	
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
1937-38 as :									
percentage :	221	82	147	114	101	130	121	91	
of average :									
1/	Average discount at Houston, Galveston, and New Orleans.								
2/	Ten-market average.								
3/	Average premiums at Memphis.								
4/	Average for August and September.								

Discounts for 13/16-inch staple continued to increase throughout the 1936-37 season, and in August and September 1937 were substantially greater than the average for the previous season and were more than twice as great as the average for the 5 years ended with the season 1932-33. Prices of Indian relative to American cotton in Liverpool were considerably higher early in the 1937-38 season than in the previous season and were somewhat higher than the 5-year (1928-32) average. The relatively large world total supply of the short staples is conducive to a continuation of relatively wide discounts for 13/16 inch staples in comparison with prices of 7/8-inch cotton throughout most of the current season.

Premiums for staples 15/16 inch and longer increased further during the first half of the 1936-37 season, but narrowed somewhat during the summer of 1937. Early in the 1937-38 season, these premiums were on the whole about the same as in the corresponding period a year ago and, with the exceptions of 1-1/16 inch and 1-1/4 inch staples, were substantially greater than the 5-year (1928-32) average. When expressed as proportions of the price of Middling 7/8-inch cotton, premiums for these staples were somewhat greater than a year ago and considerably greater than the 5-year average. Prices of Brazilian Sao Paulo Fair relative to American Middling in Liverpool early in the season 1937-38 were about the same as in the preceding season and about the same as the average for the 5 years ended with the season 1932-33. Prices of Egyptian Uppers (long-staple cotton) compared with prices of American Middling in Liverpool averaged substantially higher during the early part of the 1937-38 season than a year earlier and substantially higher than the average for the 5 years ended with 1932-33. A continued relatively strong demand for fine clothing and for industrial goods requiring long-staple cotton is favorable to maintaining relatively high premiums for the longer staple cotton throughout most of the 1937-38 season, despite the greater competition from other fabrics and technological changes which have increased the substitution of the shorter for the longer staples.

The relatively wide premiums for the longer staples, increased available supplies of planting seed of improved longer staple varieties, and prospects for classification service to growers in communities organized for quality improvement favor some increase in the staple length of American cotton in 1938.



## THE COTTONSEED OUTLOOK FOR 1938

The supply of cottonseed in the United States in 1937-38 is now expected to be about 7,900,000 tons, which is about 44 percent larger than in 1936-37, the largest for any season except 1926-27, and 20 percent larger than the average for the 5 years ended 1932-33. With stocks of cottonseed and cottonseed products usually small in comparison with production, the supplies of the various cottonseed products show about the same comparisons as the supplies of cottonseed. On the whole, the supplies of those fats and oils that are most directly competitive with cottonseed oil apparently will be about the same as or slightly smaller than for the season 1936-37 and considerably smaller than the 5-year average. On the other hand, the supply of feedstuffs which materially affects the prices of cottonseed hulls and meal will be much larger than last season but smaller than the 5-year average. The large increase over 1936-37 in the supplies of cottonseed and cottonseed products and in feedstuffs largely accounts for the marked decline in the prices of cottonseed, cottonseed products, and many of the important competitive products during the last few months. With supplies of cottonseed products materially larger than in 1936-37 and with business activity expected to be somewhat lower, prices of cottonseed products and cottonseed declined greatly during the latter part of 1936-37 and the early part of the current season. In August and September the prices of cottonseed and most cottonseed products averaged 20 to 32 percent lower than the 1936-37 average.

## Supply and price of cottonseed and specified fats and oils in the United States

Season	Cottonseed	Crude cottonseed oil	Lard	Corn, soybean, peanut, coconut and palm oils
beginning	Weight-	Price	Price	Product
August 1	ed av-	of	of	Stocks
Supply	erage	Supply	refined	plus
2/	farm	2/	Chicago	net
price	price	yellow	import	season
Million	Dollars	Million	Cents	Million
5-year av.	tons	per ton	pounds	per
1928-29 to	:	:	pound	pounds
1932-33	6.6	21.50	1,973.5	6.22
1934-35	4.5	34.71	1,849.2	9.60
1935-36	4.8	31.19	1,669.6	9.82
1936-37	5.5	33.27	1,726.4	10.42
1937-38 4/	7.9	22.92	2,310.0	7.70
1937-38 as	Percent	Percent	Percent	Percent
percentage	of average	119.7	106.6	117.1
		111.3	54.0	129.3
				127.9

1/ Stocks of crude oil plus refined reduced to a crude basis.

2/ Stocks on August 1 plus domestic production.

3/ Stocks on August 1 plus production under Federal inspection.

4/ Preliminary estimates of supply. Prices are averages for August and September.



Cottonseed Oil

The indicated supply of cottonseed oil, the principal product of cottonseed (which on the average represents about 60 percent of the value of cottonseed products) for the season 1937-38 is the largest on record, about 34 percent larger than in 1936-37, and 17 percent larger than the 5-year average. Not only was there a marked increase in the production of cottonseed oil but stocks on hand at the beginning of the season were larger than a year earlier, and larger than the 5-year average. Prices of cottonseed oil in August and September, 1937 were about 26 percent below the average for 1936-37, but 11 percent above the 5-year average. In view of the larger-than-average supply of cottonseed oil, the higher-than-average price is apparently accounted for by the smaller-than-average supplies of lard and other competitive fats and oils. In the last two seasons domestic production of cottonseed oil was supplemented by net imports, whereas in earlier seasons exports were of considerable volume and imports were negligible. It seems probable that again in 1937-38 considerable quantities of cottonseed oil will be exported despite the larger production of cotton, cottonseed, and cottonseed products in foreign countries. In general, however, imports and exports of cottonseed oil have been small in comparison with domestic utilization.

Cottonseed oil is used principally in the production of vegetable shortening and compounds in which its chief competitors are other vegetable oils, lard, edible tallows, and fish oils. The commercial supply of lard in the 1937-38 season is now tentatively estimated to be slightly smaller than the comparatively small supply of the previous season and only a little over half as large as the 5-year (1928-32) average. In view of the marked reduction in foreign demand for and exports of lard, the very small domestic supply does not mean a proportional decrease in domestic competition of lard with cottonseed oil. During the 5 years ended 1932-33, exports of lard averaged about 653,000,000 pounds or 27 percent of the domestic supply, whereas in 1936-37 they amounted to about 100,000,000 or one-tenth of the supply. Wholesale prices of lard at Chicago in August and September averaged about the same as during the 12 months ended July, 1937, and 29 percent higher than the 5-year average. As will be seen from the Hog Outlook statement, it is expected that lard prices during the remainder of the season will continue somewhat higher than a year earlier and higher than the 5-year average.

Total domestic stocks on June 30, 1937 of the principal vegetable oils which compete more directly with cottonseed oil were about 2 percent smaller than a year earlier but 28 percent larger than the 5-year (1928-32) average. The stocks situation together with very rough estimates of probable production during the cotton crop year indicate that the domestic supply of these oils will be slightly smaller than in 1936-37 but materially larger than average.

Hulls and Meal

Conditions in late October indicate that the supply of cottonseed cake and meal in 1937-38 as well as the supply of cottonseed hulls will be much larger than in 1936-37 and from one-fifth to one-third larger than the 5-year average. In the case of cake and meal, stocks at the beginning of the season were smaller than a year earlier. Consequently, the increased production accounts for all of the increased supply. In the case of cottonseed hulls, however, at the beginning of the season stocks were much larger than a year earlier. Prices of cottonseed hulls and meal in the first 2 months of the current season averaged from 30 to 32 percent lower than during the previous season and substantially lower than in the 5 years ended July 1933. The marked increase in the supply of competing feeds (see Feed Outlook) has resulted in the prices of these products being substantially lower than last year and are expected to cause prices of these products to continue materially below those existing in 1936-37 throughout the current season. The larger supplies and lower prices of competing feeds is one of the factors accounting for the decline in prices of cottonseed, hulls, and meal during recent months.

## Supply of cottonseed hulls, meal, and linters in the United States

Season	Hulls		Cake and meal		Linters, F.O.B. Mill Pts.		
beginning	Supply	Price		Price of		Average price of	
August 1	1/	at	Supply	meal-41%	Supply		
		Atlanta	1/	protein	1/	No. 2	No. 6
				at Memphis			
	Million	Dollars	Million	Dollars	Million	Cents	Cents
	tons	per ton	tons	per ton	running	per lb.	per lb.
					bales		
5-year av.							
1928-29 to							
1932-33	1.4	2.12	2.3	26.66	1.0	3.91	1.85
1934-35	.9	13.52	1.7	32.30	.9	5.75	4.05
1935-36	1.1	9.88	1.9	22.41	.9	5.49	3.44
1936-37	1.5	12.74	2.1	34.33	1.2	5.00	3.12
1937-38 2/	1.7	8.70	3.1	23.60	1.5	4.38	2.50
1937-38 as	Percent	Percent	Percent	Percent	Percent	Percent	Percent
percentage							
of average	121.4	95.4	134.8	38.5	150.0	112.0	135.1
1/ Stocks on hand August 1 plus domestic production							
2/ Preliminary estimate of supply and average of August and September prices							

Linters

The supply of linters for the current cotton-marketing season is expected to be about 25 percent larger than in the previous season and 50 percent larger than the average for the 5 years 1928-29 to 1932-33. The larger increase in the supply of linters over the 5-year average than in the case of cottonseed is accounted for by a closer delinting of the seed during recent years in response to increased demand for cellulose. The average prices of linters at western mill points in August and September this year were materially lower than the average for 1936-37 but 12 to 35 percent higher than the average for the 5-year (1928-32) average.



## THE WHEAT OUTLOOK FOR 1938

### Summary

If wheat growers respond to relatively high prices this year as they have in the past, it is probable that the acreage seeded for the 1938 harvest will not differ greatly from the 81 million acres seeded for this year's crop -- the largest seeded acreage in the history of the country.

The annual wheat outlook of the Bureau of Agricultural Economics further states that 81 million acres seeded to wheat, with average yields and average abandonment, would produce a crop of more than a billion bushels. Preliminary estimates place the 1937 production at 887 million bushels. About 660 million bushels are used annually in the United States, and with average yields could be produced on about 56 million acres. Even if exports reach the estimated 95 million bushels this year, the domestic carry-over on July 1, 1938, would be about 100 million bushels larger than in 1937.

Substantial exports of United States wheat are probable this year, as the result of increased domestic production, small world supplies, and relatively high prices in world markets. The export situation may not be so favorable for the year beginning July 1938. If about average yields per acre are obtained on the large world acreage, world wheat production in 1938 would be in excess of prospective world requirements, and carry-over stocks in the summer of 1939 would again be above the average that prevailed prior to the accumulation of stocks in 1929-33.

Unless world production in 1938 is again small or demand by importing countries increases beyond present indications, prices of wheat and income to United States wheat growers from the 1938 crop may be expected to be materially lower than during the current marketing season.

### Domestic Prospects

If United States growers respond to relatively high prices as they have in the past, it is probable that the acreage seeded for the 1938 harvest will not differ greatly from the 81 million acres seeded for this year's crop -- the largest seeded acreage in the history of the country. Present indications suggest that further increases in some areas may be offset by a return to more nearly normal acreage in other areas. Increases were intended by farmers in parts of the hard red winter wheat area, but lack of moisture has delayed seeding and the total acreage may be reduced below earlier expectations. Increases in wheat acreage may occur in parts of the hard red spring wheat area, where seeding conditions were unfavorable for this year's crop. On the other hand, reductions may occur in some Central Corn Belt States, where farmers during the last few years shifted to wheat from oats, barley, and corn, and are now working toward increased livestock production.

### Wheat now on an export basis

United States production in 1937 is now estimated at 887 million bushels. This is greatly in excess of the approximately 660 million bushels used annually in the United States for food, feed, and seed (table 1) which, with average yields, could be produced on about 56 million acres.

The 11-bushel yield per seeded acre this year is below the 10-year (1923-32) average of 12.9 bushels. Total abandonment of wheat acreage for the 1937 crop was about 17.3 percent compared with the 10-year average of 10.2 percent. Had abandonment been only average this year, over 1 billion bushels would have been produced. With about the same seeded acreage as this year, a yield as low as 8.1 bushels -- the record low yield of 1933 -- would produce fully enough wheat for the usual domestic needs. On the other hand, a yield as large as 15.1 bushels per seeded acre, which was produced in 1924, would result in a crop of about 1,200 million bushels. While it is too early to forecast yields of winter wheat, fall moisture supplies up to the middle of October suggest per-acre yields in 1938 not greatly different from 1937.

Production in excess of domestic consumption must be exported or result in an increase in domestic carry-over stocks. World trade in wheat has declined sharply since 1929, largely as a result of drastic restrictions on imports and an increased production in the major importing countries. In the early part of this period, exports from the United States declined with those from other surplus-producing countries. During the last 3 years, the United States was a net importer as a result of small crops. Substantial exports from the United States are probable in 1937-38 as a result of the large domestic crop of winter wheat, small world supplies due largely to small crops in Canada and Argentina, and relatively high prices in world markets.

#### Export outlet for 1938-39 less favorable

Unless world production in 1938 is again small or there is a considerable increase in foreign import demand beyond present indications, the export market for United States wheat in 1938-39 would be much less favorable than this year, stocks would tend to accumulate, and prices and income received by wheat growers would be materially below those of the current crop year.

Despite the sizable surplus, exports during the current crop year to date have been small, having amounted to only about 17 million bushels for the period July 1 to October 15. The small exports have been due to a number of factors, one of the most important of which has been the extreme shortage of ocean-shipping space, which has resulted in the highest rates in recent years. Ocean freight rates from United States Gulf ports to Europe in October, at about 15 cents per bushel, were about double what they were a year earlier. The threat of large shipments from Soviet Russia as well as the cheaper offerings from other countries also have been significant factors. Soviet grain exports remain largely a matter of conjecture, being dependent upon Government policy. The apparently good 1937 crop in Soviet Russia and the high level of prices favor fairly large Russian exports this year. In the years 1933-34 and 1935-36, Soviet Russia exported 34 million and 29 million bushels, respectively.

#### Need for improved quality

During the last 4 years, prices of hard wheats in the United States were high relative to prices of soft wheats because supplies of hard wheats were small compared with domestic needs, whereas supplies of soft wheats were fully ample. With larger supplies of hard wheats this year a more nearly normal price relationship between the various classes of wheat, such as existed in the 1923-27 period (table 1), may be expected. The average price for all grades

of all wheats in 1937-38, however, will be lower than would otherwise be expected because a large proportion of the hard red winter and hard red spring wheat is light in test weight per bushel and is falling in the lower grades. This situation is partly offset by the high quality of the white wheat crop in the Pacific Northwest.

Table 1.--Supply, distribution, and disappearance of wheat in the continental United States, and representative prices for selected crop years

Item	Year beginning July 1						
	Average						
	1923-	1928-	1933	1934	1935	1936	1937
	27	32					
	Mil.	Mil.	Mil.	Mil.	Mil.	Mil.	Mil.
	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Supply, distribution and disappearance							
Stocks July 1 .....	118	264	1/ 378	274	148	142	103
Production .....	795	864	552	526	626	627	887
Imports .....	3	0	---	16	34	36	---
Total supply .....	916	1,128	930	816	808	805	990
Exports and shipments 2/ .....	181	113	29	13	7	12	3/ 95
Carry-over stocks .....	114	317	274	148	142	103	3/ 202
Total 2 items .....	295	430	303	161	149	115	3/ 297
Apparent domestic disappearance:	621	698	627	655	659	4/ 690	3/ 693
Prices	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Parcels at Liverpool .....	156.0	89.9	68.2	80.6	90.0	125.8	
No.2 Hd.Winter, Kansas City ....	134.7	81.1	88.5	98.1	105.1	121.4	
No. 1 Dk.No.Spring,Minneapolis..	147.8	94.0	91.3	116.4	126.0	146.9	
No. 2 Hd.Amber Durum, " .....	138.4	88.8	103.2	137.7	112.3	156.9	
No.2 Red Winter, St. Louis .....	144.4	91.9	94.3	93.9	94.9	111.1	
No. 1 White Club, Seattle 5/ ...	135.2	83.7	75.4	83.9	82.9	107.7	

1/ Largest stocks in the history of the United States. 2/ Includes flour in terms of wheat. 3/ Forecast of October 1937. An unusual shortage of ocean-shipping space this year may serve to reduce exports below 95 million bushels. 4/ Unusually large quantities of wheat were fed in 1936 and probably will be fed again in 1937. 5/ December 1927 - August 12, 1934, Western White at Seattle. 1923 to November 1927, Western White at Portland.

Lower prices emphasize the importance of quality in obtaining better-than average returns. The causes of low-grade wheat, such as garlic, smut, high foreign-material content, and mixtures of classes, can be largely avoided by the use of clean, pure, treated seed and proper cultural and grain-handling methods on the farm. Purity of seed has suffered materially as a result of having planted much low quality seed following the droughts in recent years; there is unusual need at present, therefore, for the use of good seed in order to effect production of high-quality wheat.

#### World Prospects

During the last few years, world supplies have become closely adjusted to requirements, and carry-over stocks at the beginning of the 1937 crop year



were below the average that prevailed prior to the accumulation of stocks in 1929-33. If the disappearance in the year beginning July 1937 approximates the average for the last 3 years, world stocks in July 1938 will still be below the 1924-28 average of approximately 680 million bushels. (table 2).

The close adjustment of world supplies to requirements has resulted from a series of short crops in important producing countries, largely as a result of unfavorable weather rather than any significant reduction in acreage. In 1937, Canada had the smallest yields per acre in its history, and yields in Argentina and in the United States were below average. World acreage was at a very high level, however, so that world production in 1937, estimated at 3,809 million bushels, was only slightly smaller than the 3,830 million bushel average in the period 1928-32, when record world stocks accumulated. If about average yields per acre are obtained in 1938, world production would be in excess of the prospective world requirements and would probably result in lower world prices than in 1937-38. If yields per acre in 1938 are again so small that production only approximates requirements, world prices may be expected to remain at high levels. But the present world acreage is so large, that, over a period of years, average yields per acre would again result in large world surpluses.

#### European outlook important

Since most of the United States wheat exports ordinarily go to Europe, this country is especially interested in the European outlook. An increased production of wheat in the Orient and competition from Australia definitely limit the market for United States wheat in the Far East, even under normal conditions. Government policy in European countries seems likely to continue to favor a fully maintained acreage. This is particularly true now as a result of the tense political situation in Europe, the low level of reserve stocks on hand, and the high level of prices for imported wheat, which would cause financial concern to many countries if domestic production were decreased and imports increased. On the other hand, further marked increases in the European wheat acreage, particularly above the rather stable level of the period 1933-36, seem improbable.

Though import restrictions have been relaxed in a few countries, in the form of reduced tariffs or other charges, this must be considered largely as an effort to neutralize the higher level of world prices and prevent corresponding increases in bread costs. Most countries now have wheat monopolies or semi-official organizations that virtually control the domestic and foreign trade in wheat, and there appears to be little likelihood that these will be abolished, for some time at least. Such State grain organizations, which often enjoy considerable arbitrary power, are coming to be a much more formidable and effective type of trade barrier for wheat than high tariffs, mixing regulations, and milling quotas.

#### Some increase in European acreage likely

The decline in production that took place in 1937 in European importing countries resulted primarily from unfavorable conditions at seeding time, but also from abnormally heavy winter killing. Should more favorable conditions prevail at the time of sowing the 1938 crop, the acreage harvested will very probably be larger than for the 1937 crop. In the Danubian countries, which produce a surplus and compete with United States exports, a further increase in acreage is in prospect if weather conditions permit. In Soviet Russia a further, though relatively small increase, is also planned.

Wheat - 5.

Little change from present levels is expected in the European carry-over stocks on July 1, 1938 (table 2), but by 1939 some increase seems probable. If a more tense political situation should develop in Europe, however, there would no doubt be an urgent effort, especially on the part of the continental countries, to accumulate additional stocks. Nevertheless, the rather high prevailing wheat-price levels and the limited gold supplies, along with financial and trade difficulties in many countries, now seem likely to postpone any large "reserve" purchases as long as possible.

Table 2.--Approximate world supply and disappearance of wheat,  
1934-35 to 1937-38

Item	: 1934-35	: 1935-36	: 1936-37	: 1937-38 <u>1/</u>
	: Million	Million	Million	Million
	: <u>bushels</u>	<u>bushels</u>	<u>bushels</u>	<u>bushels</u>
Stocks, excluding Asia <u>2/</u> and	:	:	:	:
Soviet Russia .....	1,155	915	727	518
Production, excluding China and	:	:	:	:
Soviet Russia .....	3,521	3,574	3,538	3/ 3,809
Total above supply .....	4,676	4,489	4,265	4,327
Net exports from Soviet Russia .....	2	29	4	4/ (30)
Total above .....	4,678	4,518	4,269	4,357
Less year-end stocks .....	915	727	518	
Apparent world disappearance .....	3,763	3,791	3,751	
	: <u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>
Price per bushel of British Wheat	:	:	:	:
Parcels <u>5/</u> .....	79	84	105	

1/ Preliminary as of September 1937.

2/ Year-end stocks in India, Japan and Egypt do not change materially from year to year and have probably averaged about 40 million bushels in recent years. No figures are available for China. (European stocks excluding Russia in 1937 are estimated at 189 million bushels.)

3/ Average production for 5 years when carry-over stocks attained record size was 3,831 million bushels.

4/ Not a forecast, nominal figure based on 1933 and 1935, when net exports amounted to 34 and 29 million bushels; could be more or less depending on Government policy.

5/ Deflated by Statist Index (1910-14 = 100) and converted at par.

## THE RYE OUTLOOK FOR 1938

Total supplies of rye in the United States for the 1937-38 crop year are estimated at 58 million bushels. It seems reasonable to expect that about 19 million bushels may be used for milling and distilling, so that, if seed and feed should amount to about 15 million bushels, total disappearance would be about 34 million bushels. On the basis of these figures and a normal carry-over of 8 to 10 million bushels, about 15 million bushels would be available for export or other disposition.

Unless Soviet Russia enters the export market in volume, significant exports from the United States are possible this year as a result of greatly reduced European supplies. Poland, which has been the most important rye exporter in recent years, is close to a deficit basis in 1937-38, although it is possible that small quantities will be exported at the expense of domestic needs in order to relieve market congestion during the heavy fall marketing period, and in order to help somewhat in the present unfavorable foreign trade outlook of that country. The Danubian region has only a moderate surplus and only small quantities may be available from the Baltic States.

A part of the present surplus of rye also will be removed from competitive channels through purchase by the Federal Surplus Commodities Corporation to be ground and distributed for relief purposes. This is expected to help support the market in 1937-38. Purchases of this kind, however, should not be counted on as a permanent means of helping dispose of depressing surpluses in coming years.

Unless the acreage harvested as grain in 1938 is reduced, yields per acre are low, or European supply is again small, rye prices for the 1938 crop may be lower than those for the 1937 crop.



## THE TOBACCO OUTLOOK FOR 1938

### Summary

The 1938 outlook for most types and classes of tobacco, flue-cured and fire-cured being notable exceptions, appears to be fairly satisfactory, states the Bureau of Agricultural Economics. In the case of flue-cured tobacco, owing to the anticipated increase of stocks resulting from the large 1937 crop, prospects are less favorable than a year ago.

With domestic consumption expected to show a further slight increase and with larger exports, disappearance of tobacco in 1937-38 is expected to be the highest in recent years. For most types other than flue-cured, stocks at the beginning of the 1938-39 marketing season are likely to be fairly well in line with prospective disappearance. The marketing situation in 1938 will largely depend, therefore, upon the ability of growers to keep their 1938 production reasonably well in line with domestic consumption and exports.

The 1937 tobacco crop according to October estimates will be 1,474,683,000 pounds. This figure is only slightly above the 1928-32 average production but nearly 28 percent larger than the small 1936 crop. The indicated crop is somewhat larger than the prospective disappearance of 1937-38 and will result in moderately increased stocks.

Domestic Situation. - Cigarette consumption has been increasing since 1932 and will establish new record levels in 1937. From January through September 1937 cigarette consumption was 7.0 percent higher than for the same months of 1936. Cigar consumption has increased each year since 1933. The prospects are for some further increase in cigarette and cigar consumption in 1938. No significant change appears likely in the consumption of chewing tobacco, smoking tobacco, and snuff. Total consumption of tobacco products in 1938 is expected to increase only slightly over 1937.

The Foreign Situation. - Foreign demand prospects for the 1937 crop of flue-cured tobacco, which comprises about three-fourths of our total leaf tobacco exports, are favorable. For burley, Maryland, and dark air-cured, the foreign market is expected to continue at near the present level. The outlook for fire-cured types, on the other hand, continues to be unfavorable.

European countries constitute the principal export market for American tobacco, accounting for about 75 percent of our total foreign sales of unmanufactured tobacco, with the United Kingdom the dominant market for flue-cured leaf. It is estimated that tobacco consumption in Europe in 1937-38 may be about 5 percent larger than in 1936-37. Stocks of American tobacco, especially flue-cured, are low in relation to increased consumption. The situation in the Orient is uncertain, although the indications are that exports in 1937-38 may be materially reduced. The demand in Australia for American flue-cured tobacco, for which it is the third ranking customer, is expected to continue at the present level.

• Exports of tobacco (including leaf, stems, trimmings, and scrap) from the United States during the fiscal year 1936-37 totaled 416,869,000 pounds, compared with 432,665,000 pounds in 1935-36, or a decline by 3.7 percent. In the case of flue-cured tobacco, which constitutes the bulk of exports, the 1936 crop was short in the grades customarily purchased by the United Kingdom. During the 5-year period ended June 30, 1937, exports of tobacco averaged 419,358,000 pounds, and in the preceding 5-year period the average was 535,899,000 pounds.

#### Summary by Types

Flue-cured. - Domestic consumption is increasing. Prospects favor increased exports during the current marketing year to replenish foreign stocks, but decreased exports in 1938 seem likely unless prices are materially lower. The 1937 crop is substantially larger than the anticipated 1937-38 disappearance and increased stocks on July 1, 1938 are expected. Acreage in 1938 should be reduced about 10 percent as compared with the 1937 harvested acreage.

Burley. - Stocks are low and some increase in acreage in 1938 over 1937 appears desirable.

Maryland. - The 1937 crop was curtailed by blue mould and is less than present disappearance. Domestic consumption is increasing. Slightly larger production in 1938 than in 1937 appears justified.

Fire-cured. - Snuff consumption shows no significant change and exports continue to decline. Acreage should be decreased until a by-products diversion program is no longer necessary to sustain prices.

Dark air-cured. - Supplies of these tobaccos are reasonably well balanced with present level of disappearance. Disappearance is expected to continue at about present levels. Maintenance in 1938 of 1937 acreage appears desirable.

Cigar types. - Stocks for many cigar types are low and with cigar consumption increasing, acreage increase for many types appears justified. Consumption of scrap chewing is increasing slightly.

Flue-cured Tobacco, Types 11, 12, 13, and 14

The outlook for flue-cured tobacco in 1938 is such as to suggest the need of a cut of about 10 percent from the acreage harvested in 1937 if the present marketing situation is to be maintained. This would mean a decrease to about 860 thousand acres from the 958 thousand acres harvested in 1937 and compares with an average of 815 thousand acres in the 5-year period 1931-35.

Increased Stocks in Prospect. - Although domestic consumption from the 1937 crop is expected to be around 355 million pounds farm-sales weight, which is greater than for any previous year, and exports appear likely to be substantially larger than those from the 1936 crop, the total of exports and domestic consumption will be substantially below the 1937 production. As a result of this stocks on July 1, 1938 will be increased accordingly. According to the October estimate and notwithstanding losses from blue mould, the 1937 production amounts to 831 million pounds. The total supply in the United States on July 1, 1937, of 1,714 million pounds was almost 160 million pounds greater than the supply of July 1, 1936. In view of the anticipated large increase of stocks resulting from the large 1937 crop, it appears that a 1938 crop of from 675 to 725 million pounds, such as may be expected with average yields of recent years on the acreage indicated above, would be in line with requirements. Prices for that part of the 1937 crop which had been sold by October 1 have been about equal to those prevailing for the 1936 crop. These prices together with those paid for other crops produced in the same area, notably cotton, have been such as may stimulate increased plantings of flue-cured tobacco, whereas an actual decrease appears essential. The extent to which growers are willing to hold acreage to a level which would meet the indicated requirements is consequently one of the most important factors affecting the 1938 outlook for flue-cured tobacco.

Domestic Consumption Increasing. - Domestic consumption of flue-cured tobacco is expected to continue toward higher levels owing chiefly to the expanding use of cigarettes, which accounts for about 80 percent of the domestic consumption. Cigarette consumption during the year ended June 30, 1937 was approximately 159 billion cigarettes as contrasted with 142 billion during the previous year, or an increase of 12 percent. However, cigarette withdrawals during the past 9 months show that the rate of increase is slowing down. The consumption of smoking and plug chewing tobacco, which accounts for the remainder of the domestic consumption, has shown little change in recent years.

Expect Larger Exports from 1937 Crop. - Foreign demand has increased in 1937-38, resulting in part from low stocks abroad which came about largely because of limited purchases from the 1936 crop. It is probable that foreign takings from the 1937 crop will be larger than consumption in order that stocks may be built up to more normal levels. Consequently, it is anticipated that takings from the 1938 crop may be smaller than from the 1937 crop unless prices are materially lower.



United States exports of flue-cured tobacco during the marketing year 1936-37 totaled 302,640,000 pounds (export weight) compared with 322,792,000 pounds during the preceding marketing year, and 366,346,000 on the average for the period 1928-32. Exports to the United Kingdom, the principal foreign market, declined from the record level of 226,631,000 pounds in 1935-36 to 170,478,000 pounds in 1936-37. This decline was due in part to heavy exports from the 1935 crop, but chiefly to a lack of grades from the 1936 crop suitable for the English trade. On the other hand, exports to most other European countries and to the Orient, increased in 1936-37 above the 1935-36 level and partly offset the decline in exports to the United Kingdom.

Stocks of flue-cured tobacco in the United Kingdom are low and consumption is increasing at an annual rate of about 5 percent. Although the consumption of Empire-grown flue-cured tobacco is becoming increasingly important, withdrawals of Rhodesian and Indian tobacco having reached record levels during the first 6 months of 1937, the consumption of flue-cured tobacco from the United States also is increasing. Supplies of Empire-grown tobacco, except Canadian, are no larger than last year, so the bulk of the requirements of the United Kingdom for rebuilding stocks, and for manufacture will no doubt be furnished by the United States. As stocks probably will be brought up to more normal levels from the 1937 crop, British purchases from the 1938 crop may decline to the level of consumption.

The outlook for exports to other European countries, excepting Germany, also appears favorable. Consumption of the products in which flue-cured tobacco is used is increasing. Stocks in these countries are reported to be near normal and exports are expected to be about equal to consumption. In the case of Germany, which formerly purchased substantial quantities of American-grown flue-cured tobacco, governmental policies have restricted importations from the United States. The probability of any reduction in German restrictions appears remote, and the outlook is unfavorable for any expansion of exports to that country above the present low level.

Although exports to the Orient increased substantially in 1936-37 over the low level of 1935-36, the outlook for 1937-38, in view of the present conflict, is uncertain, with indications that exports may be materially reduced.

Stocks of American-grown flue-cured tobacco in China are reported to be low, partly as a result of destruction in the fighting zones. Exports to China from the 1937 crop will depend largely upon such factors as the availability of shipping facilities, the time when Shanghai factories will be able to resume operations, and the success of marketing operations for the Chinese crop.

With production in the Japanese Empire increased in 1937 more than sufficient to meet expanding consumption requirements, imports from the United States are expected to decline from the present level. Governmental policies appear probable which will further increase the advantages of native leaf in competition with American tobacco.

The acreage of flue-cured tobacco within the Japanese Empire, and in the Chinese provinces, continues to increase. For the two countries combined, production in 1937 is estimated to be about 300 million pounds, compared with approximately 243 million pounds a year ago, and an average of 180

million pounds during 1931-35. Production has increased more rapidly than consumption of flue-cured tobacco in these countries.

Exports to Australia continue to increase along with the increasing consumption of tobacco products in that country, and the outlook for 1938 is favorable. In the case of Canada, production in 1937 is at a record level, with prospects for a further increase in 1938. Exports from the United States to Canada which have been declining for several years, are not expected to improve.

### Burley Tobacco, Type 31

With stocks of burley tobacco at the lowest level since 1931 and disappearance increasing, the outlook is good and acreage should be increased sufficiently to cover annual requirements and replenish stocks. Stocks as of October 1, 1937 are estimated at about 568 million pounds, farm-sales weight, compared with 682 million pounds a year earlier. This drop of 114 million pounds from the figure for October 1, 1936 resulted from the abnormally short 1936 crop and reduced the carry-over to an unduly low point in view of the present rate of consumption. An increase in stocks is necessary.

Moderate increase in acreage justified. - If production is increased moderately above the level of 1937, stocks will be replenished sufficiently for manufacturing purposes without jeopardizing reasonable returns to the growers. A production of not more than 400 million pounds, representing with average yields an acreage of 475 to 500 thousand acres, appears justified in 1938. The estimated 1937 acreage is 420 thousand acres.

Domestic consumption increasing. - The 1937 production is estimated at 359 million pounds (October report), and while this is an increase of about 141 million pounds over 1936, it is largely offset by the estimated decrease of 114 million pounds in the October 1 carry-over, computed on farm-sales weights. The total disappearance of burley tobacco, including domestic consumption and exports during the year ended October 1, 1937, is estimated at about 331 million pounds compared with 309 million pounds during the preceding 12 months. This is an increase of about 22 million pounds over 1935-36, whereas the latter year showed an increase of 24 million pounds over 1934-35. The consumption of cigarettes continues to increase, although the rate of increase appears to be tapering off, and other products in which burley tobacco is used vary from moderate declines to moderate increases. Taken together, some further increase in domestic consumption may be expected.

Exports of burley are small, relative to domestic consumption usually amounting to about 5 percent of the crop. Prospects are favorable for a continuation of exports in 1937-38 at around the 1936-37 level.

### Maryland Tobacco, Type 32

The outlook for Maryland tobacco is such that a moderate increase in acreage in 1938 over the 35,500 acres harvested in 1937 appears justified.

The 1937 acreage was curtailed substantially by an outbreak of blue mould at planting time. This factor, coupled with a somewhat unfavorable growing season, resulted in a relatively small crop of 24.8 million pounds, as compared with 29.6 million pounds in 1936, and 26.6 million pounds on the average during the period 1931-35.

While exports from January through August have been somewhat less in 1937 than in 1936 and information that would suggest an early improvement in foreign demand is lacking, domestic disappearance, now constituting approximately 80 percent of total disappearance, is expected to increase at about the same rate as the consumption of cigarettes. Stocks as of January 1, 1938, will probably show an increase from the previous year, but in view of the relatively short 1937 crop the total supply will be slightly less than it was on January 1, 1937. Prices at Baltimore during recent months have been substantially above those prevailing during the same months of the previous year, reflecting the probable decrease in total supply and indicating that a moderate increase in acreage in 1938 would be warranted.

#### Fire-cured Tobacco, Types 21, 22, 23, and 24

The outlook for these tobaccos continues unfavorable with exports continuing to decline and snuff consumption, the principal domestic outlet, showing no significant change. The unfavorable situation would have been more apparent in 1935-36 and 1936-37 but for the stimulus to prices and disappearance resulting from the byproducts diversion program of the Agricultural Adjustment Administration. Acreage of these tobaccos should be curtailed until a diversion program is no longer needed.

October estimates indicate a 1937 production of 113,200,000 pounds. This figure is less than the disappearance of recent years when disappearance was stimulated by the byproducts diversion program, but it is approximately equal to anticipated domestic consumption for normal purposes and exports for the 1937-38 season. Should the byproducts diversion program again be a factor in the 1937-38 season it is probable that disappearance in 1937-38 will not be greatly different from that in 1936-37, in which case stocks on October 1, 1938 will be further reduced. Stocks of these tobaccos, however, have been heavy for years and will still be ample for normal domestic consumption and for export.

Exports which have been declining for years continue to decline and for the 11-month period October 1936 to August 1937 were about 4 percent less than for the same months in 1935-36 and the lowest for which reports are available. Military operations in Spain and exchange restrictions in Germany have greatly reduced exports to these countries.

The foreign situation offers little promise of improvement, for many countries which formerly imported American fire-cured leaf now produce a larger share of their supplies, or obtain them from their colonies or from other countries. Also the continued trend toward the increased use of milder tobaccos, has adversely affected foreign consumption of fire-cured tobaccos.



Dark Air-cured Tobacco, Types 35, 36, and 37

The outlook for dark air-cured tobaccos is such that a production in 1938 about the same as in 1937 seems warranted.

October estimates indicate a 1937 production of 41,800,000 pounds. This is the largest production since 1931 and about 63 percent above the small 1936 crop. Production of dark air-cured from 1932 to 1936 was less than disappearance and stocks on October 1, 1937 were the lowest in years. Total supplies in 1937-38 are about the same as those of 1936-37.

Reflecting the practically stationary output of chewing tobacco and decreased exports, disappearance of these tobaccos, which had been declining for more than a decade, reached a low level in the 1933-34 season. Disappearance during recent years has improved somewhat and is expected to show little change in 1937-38. The 1937 crop is only slightly larger than the annual disappearance of recent years and it appears that stocks on October 1, 1938 will be about the same as for October 1, 1937. Production, stocks, and supplies of these tobaccos in 1937-38 are reasonably well balanced to the present level of disappearance.

Cigar Tobacco, Types 41-45, 51-55, and 61-62

In view of the expanding consumption of products manufactured from cigar leaf and relatively low stocks, an increase of 10 to 15 percent in total acreage seems justified.

Although the quantity of scrap chewing tobacco manufactured has remained relatively constant in recent years the consumption of cigars has increased for 3 successive years. Withdrawals of cigars during the calendar year 1936 were 8.8 percent above those of the previous year, and for the first nine months of 1937 were 5.3 percent higher than for the same period of 1936. The percentage increase during 1937 has been greatest in those classes manufactured to retail at more than 5 cents each, but only 11 percent of the total withdrawals was in those classes during this period.

Disappearance of these types of tobacco during 1936-37 was approximately 119 million pounds and some increase is probable in 1937-38. As the 1937 crop is estimated at 104,700,000 pounds, stocks at the beginning of the 1938-39 marketing season will be lower than the 312 million pounds estimated as of October 1, 1937. Dealers' and manufacturers' stocks have declined steadily since 1932 as production has been below the level of disappearance each year. It is probable that farm stocks of old tobacco, which have been large in recent years, are now practically negligible.

In order to provide a more normal supply of cigar tobacco in the 1938-39 marketing season, a 1938 crop of from 95 thousand to 100 thousand acres of all types combined would be needed with average yields, as compared with the 86,300 acres harvested in 1937.

Filler Types 41-45. - The 1937 production of filler types according to October estimates will be approximately 46 million pounds or slightly less than the estimated disappearance. However, the stocks of Pennsylvania

Seed-leaf, Type 41 remain large. The consumption of this type does not seem to have kept pace with the increased withdrawals of cigars. For other filler types, however, a moderate increase in production seems justified.

Binder Types 51-55. - October estimates of binder types indicate a 1937 production of approximately 49 million pounds, whereas disappearance during the 1936-37 marketing year is estimated at 60 million pounds. The proportion of the total stock of these types consisting of stemming grades (the grades most generally used in the manufacture of scrap chewing) has decreased slightly during the last year. The situation for these types appears favorable for a substantial expansion of production.

Wrapper Types 61-62. - The production of wrapper types in 1937 according to October estimates will be 10.4 million pounds, a quantity slightly in excess of probable disappearance. The disappearance of Connecticut Valley, Type 61, has not increased during the last 3 years. It appears that this failure to keep pace with the increase in cigar production is, at least in part, attributable to the relatively small stocks of this type and that an increase in production to provide a somewhat larger carryover would be desirable to enable this type to share in increases in cigar production. For Georgia-Florida, Type 62, a production approximately equal to that of 1937 seems reasonable.

Table 1.--United States tobacco, all types: Acreage, production, stocks, supply, disappearance, ratio of supply to disappearance, and price; average 1928-32, annual 1932-37

Year	Acreage harvested	Production	Stocks beginning of market- ing year, farm-sales weight 1/	Total supply	Disappear- ance during marketing year	Ratio of total supply to disap- pearance	Season average farm price per pound
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Ratio	Cents
1928-32							
5-yr. av.	1,871.9	1,427.2	1,848.8	3,276.0	1,336.5	2.5	14.0
1932	1,403.8	1,017.3	2,303.9	3,321.2	1,182.0	2.8	10.5
1933	1,738.4	1,371.1	2,139.2	3,510.3	1,223.6	2.9	13.0
1934	1,278.5	2/ 1,055.1	2,286.7	3,341.8	1,121.9	3.0	21.3
1935	1,437.1	1,297.2	2,219.9	3,516.7	1,329.7	2.6	18.4
1936	1,436.9	1,153.1	2,187.0	3,340.1	3/ 1,313.7	2.5	4/ 23.3
1937	4/ 1,689.7	4/ 1,474.7	3/ 2,026.4	3/ 3,501.1	---	---	---

1/ Stocks held on farms not included. Marketing or crop year, flue-cured, July-June; Maryland, beginning January of year following production; other types, October-September.

2/ Quantity marketed.

3/ Estimated.

4/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.



Table 2.--Withdrawals of small cigarettes and large cigars, and production of smoking and scrap chewing tobacco; average 1928-32, annual 1932-37

Calendar year	Small cigarettes		Smoking tobacco 1/		Large cigars 2/		Scrap chewing 1/	
	: Change :		: Change :		: Change :		: Change :	
	: from :		: from :		: from :		: from :	
	Number	: preceding:	Quantity	: preceding:	Number	: preceding:	Quantity	: preceding:
		: period :		: period :		: period :		: period :
	Billions	Percent	1,000 pounds	Percent	Millions	Percent	1,000 pounds	Percent
1928-32								
5-yr. av.	112.3		169,682		5,731.3		65,915	
1932	103.6	- 8.7	190,987	+ 4.4	4,442.9	-16.5	50,080	-18.2
1933	111.8	+ 7.9	191,766	+ 0.4	4,344.8	- 2.2	44,724	-10.7
1934	125.6	+12.4	193,075	+ 0.7	4,597.2	+ 5.8	44,786	+ 0.1
1935	134.6	+ 7.2	191,750	- 0.7	4,763.9	+ 3.6	44,007	- 1.7
1936 3/	153.2	+13.8	194,155	+ 1.3	5,182.9	+ 8.8	44,881	+ 2.0
1st 7 mo. 4/								
1936 3/	115.2	+11.4	114,478	+ 2.9	3,771.4	+ 3.7	26,376	+ 2.7
1937 3/	123.3	+ 7.0	109,695	- 4.2	3,971.0	+ 5.3	26,578	+ .8

Compiled from reports of the Bureau of Internal Revenue.

1/ Prior to 1931, production of smoking and scrap chewing tobacco was not published separately by the Bureau of Internal Revenue. Data for the years 1928 through 1930 are estimates.

2/ Cigars shipped from Puerto Rico and the Philippines not included.

3/ Preliminary.

4/ Data for withdrawals of small cigarettes and large cigars are for 1st 9 months. Production of plug, twist, and fine-cut chewing tobacco, and withdrawals of snuff; average 1928-32, annual 1932-37

Calendar year	Plug		Twist		Fine-cut		Snuff	
	: Change :		: Change :		: Change :		: Change :	
	: from :		: from :		: from :		: from :	
	Quantity	: preceding:	Quantity	: preceding:	Quantity	: preceding:	Quantity	: preceding:
		: period :		: period :		: period :		: period :
	1,000 pounds	Percent	1,000 pounds	Percent	1,000 pounds	Percent	1,000 pounds	Percent
1928-32								
5-yr. av.	84,452		7,200		4,671		39,352	
1932	61,945	-19.2	4,918	-22.9	3,354	-19.6	36,412	- 7.9
1933	61,361	- 0.9	5,042	+ 2.5	3,120	- 7.0	36,325	- 0.2
1934	62,760	+ 2.3	5,080	+ 0.8	2,970	- 4.8	37,165	+ 2.3
1935	60,588	- 3.5	5,604	+10.3	4,683	+57.7	36,077	- 2.9
1936 1/	59,165	- 2.3	6,394	+14.1	5,498	+17.4	38,100	+ 5.6
1st 7 mo. 2/								
1936 1/	34,330	- 3.2	3,647	+15.1	3,167	+26.2	28,449	+ 5.4
1937 1/	34,729	+ 1.2	3,978	+ 9.1	3,288	+ 3.8	27,330	- 4.1

Compiled from reports of the Bureau of Internal Revenue.

1/ Preliminary.

2/ Data for withdrawals of snuff for 1st 9 months.

Table 3.-United States exports of tobacco to principal importing countries, by types, crop years,  $\frac{1}{2}$  1928-29 to 1936-37

FLUE-CURED, TYPES 11-14

Country to which exported	1928-29	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37
	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.
United Kingdom	171,515	186,583	184,448	129,399	131,807	170,507	152,389	226,631	170,478
China $\frac{3}{4}$	131,254	128,144	143,942	77,436	76,607	87,029	28,976	24,039	43,096
Australia	18,146	19,493	23,173	11,007	8,593	10,841	14,813	18,120	19,407
Germany	13,341	8,150	12,274	7,611	4,052	7,838	1,102	6,619	2,726
Netherlands	9,392	7,267	7,624	9,688	4,812	11,548	3,604	7,107	9,017
Japan	14,564	10,395	11,504	4,128	1,735	7,753	9,370	6,702	9,908
Canada	14,601	13,660	11,210	10,630	7,467	7,949	7,817	4,143	3,748
British India	5,884	3,874	1,162	3,721	3,293	2,236	1,659	2,299	2,901
Belgium	3,927	2,190	3,539	3,229	2,679	3,209	1,878	2,252	4,809
Other countries	30,825	50,186	33,662	28,588	25,497	21,420	22,861	24,380	36,550
Total	413,949	429,942	432,688	285,487	269,662	330,330	244,474	322,792	302,640

VIRGINIA FIRE-CURED, TYPE 21

United Kingdom	1,566	2,736	1,152	2,127	620	1,143	1,620	1,382
Australia	769	1,861	777	554	361	359	42	60
Germany	2,134	2,353	2,071	1,354	1,961	1,479	1,293	1,213
Netherlands	766	785	1,562	1,983	1,193	1,314	445	297
China	7	285	0	0	0	10	10	125
Norway	1,784	1,635	1,505	1,702	1,459	1,312	1,539	1,570
Canada	289	180	93	54	59	43	114	176
Sweden	1,087	147	415	343	1,588	1,805	1,169	1,537
Denmark	289	133	217	348	355	505	250	150
Belgium	2,232	434	629	1,845	1,418	1,030	906	421
Portugal	1,053	233	506	10	244	332	600	258
France	1,698	651	150	0	0	0	56	20
Other countries	7,901	6,577	2,710	2,944	2,126	2,078	2,237	2,387
Total	21,530	13,070	11,787	13,264	11,370	11,960	10,281	9,896

See footnotes at end of table.

Continued -

Table 3.-United States exports of tobacco to principal importing countries, by types, crop years, 1/  
1928-29 to 1936-37 - continued

KENTUCKY AND TENNESSEE FIRE-CURED, TYPES 22, 23, AND 24												
Country to which exported	1928-29	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37			
	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.
France	15,604	37,431	18,580	31,274	21,351	20,267	17,515	18,915				
Spain	2,735	2,448	2,011	9,945	15,854	5,416	12,222	7,844				
Belgium	4,843	7,221	8,051	8,490	7,746	10,699	5,502	4,606				
Italy	2,647	1,363	4,074	1,645	545	922	574	101				
Netherlands	8,413	15,072	9,246	4,272	2,375	3,122	2,114	2,296				
Germany	9,729	9,153	9,186	6,354	5,720	6,314	7,015	3,570				
United Kingdom	7,741	5,941	5,829	4,747	4,694	2,174	3,470	2,342				
Argentina	2,883	2,643	1,916	1,990	846	535	141	85				
Switzerland	1,149	1,416	2,873	1,090	1,161	3,539	1,548	1,520				
Other countries	21,152	21,844	12,370	12,650	10,552	10,048	10,164	11,087				
Total	76,896	104,532	74,136	82,457	70,844	63,036	60,265	52,366				
BURLY, TYPE 31												
Belgium	1,995	3,812	3,045	4,339	3,887	5,012	3,554	2,293				
Portugal	1,956	2,745	1,581	1,549	1,466	2,497	2,659	2,111				
United Kingdom	114	409	783	297	106	207	159	219				
Netherlands	143	174	331	1,126	1,114	1,927	1,165	586				
Germany	112	169	427	715	403	478	550	399				
Newfoundland and Labrador	297	285	180	198	202	273	282	265				
Australia	465	631	113	363	527	275	521	314				
Other countries	1,073	1,436	2,203	2,457	2,651	3,274	3,140	2,741				
Total	6,155	9,661	5,663	11,044	10,356	13,943	12,030	8,928				
MARYLAND, TYPE 32 (Includes Eastern Ohio)												
France	3,547	6,016	3,253	3,788	3,750	2,066	162	556	880			
Netherlands	3,328	1,435	1,080	546	2,441	2,763	3,267	1,623	2,434			
Germany	426	492	185	115	226	608	280	398	243			
Belgium	694	642	1,139	597	1,120	1,270	394	161	488			
Italy	85	78	325	81	552	143	109	85	0			
Switzerland	1,487	1,788	1,700	1,903	1,445	1,899	1,684	1,174	1,067			
Other countries	1,330	1,126	2,039	519	635	437	707	693	983			
Total	10,947	11,577	9,721	7,549	10,169	9,186	7,103	4,690	6,100			

Compiled from Monthly Summary of Foreign Commerce of the United States and official records of the Bureau of Foreign and Domestic Commerce.

1/ Flue-cured, July-June; Maryland, beginning January 1 of year following production; other types, October-September. These figures do not include a small amount of several types shipped to Puerto Rico; no shipments of leaf tobacco to Alaska or Hawaii. 2/ Preliminary. 3/ Includes Hong Kong and Kwantung.



Table 4.-United States exports of tobacco by types, crop years;<sup>1/</sup>  
average 1925-26 to 1929-30, annual 1930-31 to 1936-37

Type	Average: 1925-26 to 1929-30	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
Flue-cured	357.2	432.7	285.5	269.7	330.3	244.5	322.8	302.6
Virginia fire-cured	20.4	11.8	13.3	11.4	12.0	10.3	9.9	<u>3/</u> 8.7
Kentucky and Tennessee fire-cured	100.9	74.1	82.5	70.8	63.0	60.3	52.9	<u>3/</u> 49.1
Burley	9.4	8.7	11.0	10.4	13.3	12.0	8.9	<u>3/</u> 10.6
Maryland <sup>4/</sup>	14.0	9.7	7.5	10.2	9.2	7.1	4.7	6.1
One Sucker	<u>5/</u> 3.2	1.8	1.0	1.0	1.0	1.1	.8	<u>3/</u> .4
Green River	<u>5/</u> 9.0	5.4	4.3	2.4	2.4	3.4	3.7	<u>3/</u> 2.2
Cigar leaf	2.1	3.7	.8	1.3	1.5	1.2	.7	<u>3/</u> .7
Black fat, water baler, and dark African	<u>5/</u> 4.6	7.6	10.4	8.4	8.3	9.7	10.1	<u>3/</u> 8.3
Perique	<u>6/</u> .2	.1	.1	<u>7/</u>	.1	.1	.1	<u>3/</u> .1
Stems, trimmings, and scrap	8.9	26.1	20.9	20.9	18.6	16.2	17.5	<u>3/</u> 19.4

Compiled from Monthly Summary of Foreign Commerce of the United States and official records of the Bureau of Foreign and Domestic Commerce.

- <sup>1/</sup> Flue-cured, July-June; Maryland, beginning January 1 of the year following production; other types, October-September. Export weight.
- <sup>2/</sup> Preliminary.
- <sup>3/</sup> Exports for 11 months, October-August, 1936-37.
- <sup>4/</sup> Includes Eastern Ohio, Type 71.
- <sup>5/</sup> 3-year average.
- <sup>6/</sup> One year only.
- <sup>7/</sup> Less than 50,000 pounds.

Table 5.--Flue-cured tobacco: Acreage, production, stocks, supply, disappearance, ratio of supply to disappearance, and price; average 1928-32, annual 1932-37

Year	Acreage : harvested :	production : Million pounds	Stocks : July 1, : farm-sales : weight : Million pounds	Total : supply : July 1 : Million pounds	Disappear- : ance, year : beginning : July 1 : Million pounds	Ratio of : total supply : to disap- : pearance : Ratio	Season : average : farm price : per pound : Cents
1928-32	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Ratio	Cents
5-yr. av.	989.4	679.5	742.3	1,421.8	675.9	2.1	13.5
1932	617.5	373.7	867.0	1,240.7	564.9	2.2	11.6
1933	920.6	733.4	675.8	1,409.2	646.2	2.2	15.3
1934	684.2	556.8	763.0	1,319.8	567.2	2.3	27.3
1935	874.0	811.2	752.6	1,563.8	692.5	2.3	20.0
1936	864.5	682.8	871.3	1,554.1	1/ 670.9	2.3	1/ 22.0
1937	1/ 958.0	1/ 830.8	1/ 883.2	1/ 1,714.0	---	---	---

1/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.

Table 6.-Burley tobacco: Acreage, production, stocks, supply, disappearance, ratio of supply to disappearance, and price; average 1928-32, annual 1932-37

Year	Acreage : harvested :	Production : million pounds :	Stocks : Oct. 1, : farm-sales : weight : million pounds :	Total : supply : Oct. 1 : million pounds :	Disappearance : ance, year : beginning : Oct. 1 : million pounds :	Ratio of : total supply : to disap- : pearance : Ratio :	Season : average : farm price : per pound : Cents :
1928-32	1,000 acres						
5-yr. av.	426.6	336.8	487.7	824.5	275.4	3.0	17.8
1932	410.2	303.7	682.6	986.3	260.0	3.7	12.5
1933	501.5	377.5	720.3	1,097.8	277.5	4.0	10.5
1934	303.5	1/ 234.2	320.3	1,054.5	284.6	3.7	16.9
1935	278.9	220.9	769.9	990.8	309.1	3.2	19.1
1936	301.3	218.3	681.7	900.0	2/ 331.8	2.7	3/ 35.8
1937	3/ 420.6	3/ 359.4	2/ 568.2	2/ 927.6	---	---	---

1/ Quantity marketed.

2/ Estimated.

3/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.



Table 7.-Maryland tobacco: Acreage, production, stocks, supply, disappearance, ratio of supply to disappearance, and price; average 1928-32, annual 1932-37

Year	: Acreage : harvested	: Production :	: Stocks : Jan. 1, : farm-sales : weight 1/	: Total : supply : Jan. 1 : 1/	: Disappearance- : ance, year : beginning : Jan. 1 : 1/	: Ratio of : total supply : to disap- : pearance : per pound	: Season : average : farm price
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Ratio	Cents
1928-32							
5-yr. av.	34.9	24.3	21.7	46.0	20.7	2.2	22.7
1932	37.0	28.7	32.3	61.0	22.1	2.8	16.8
1933	37.0	22.2	38.9	61.1	25.1	2.4	17.8
1934	36.4	26.2	36.0	62.2	23.6	2.6	17.5
1935	37.0	28.7	38.6	67.3	28.8	2.3	20.0
1936	37.0	29.6	38.5	68.1	2/ 26.0	2.6	3/ 21.0
1937	3/ 35.5	3/ 24.8	2/ 42.1	2/ 66.9	---	---	---

1/ Stocks as of January 1 of year following production; disappearance beginning January 1 of year following production.

2/ Estimated.

3/ Preliminary, Acreage estimate as of July 1 and production estimate as of October 1.

Table 8.--Fire-cured tobacco, Types 21-24: Acreage, production, stocks, supply, disappearance, ratio of supply to disappearance, and price; average 1928-32, annual 1932-37

Year	Acreage : harvested	Production : Million pounds	Stocks : Oct. 1, farm-sales weight : Million pounds	Total supply : Oct. 1 : Million pounds	Disappearance : since, year : beginning : Oct. 1 : Million pounds	Ratio of : total supply : to disappearance : Ratio	Season : average farm price : per pound : Cents
1928-32	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds		
5-yr. av.	207.5	160.5	173.3	333.8	155.8	2.1	9.5
1932	161.3	124.2	208.1	332.3	123.6	2.7	6.2
1933	168.3	128.4	208.7	337.1	137.1	2.5	9.1
1934	152.0	126.4	200.0	326.4	102.5	3.2	10.8
1935	142.6	117.4	223.9	341.3	133.3	2.5	9.2
1936	126.7	99.7	208.0	307.7	133.9	2.3	11.8
1937	3/ 140.9	3/ 113.2	2/ 173.8	2/ 287.0	---	---	---

1/ Quantity marketed.

2/ Estimated.

3/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.

Table 9.—Fire-cured tobacco: Acreage, production, stocks, supply, disappearance, and price, by types; average 1928-32, annual 1932-37

Year	Acreage harvested	Production	Stocks Oct. 1, farm-sales weight	Total supply Oct. 1	Disappear- ance, year beginning Oct. 1	Season average farm price per pound
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Cents
<u>Virginia fire-cured, Type 21</u>						
1928-32						
5-yr. av.	31.4	21.9	40.1	62.0	27.2	9.7
1932	20.8	13.3	38.3	51.6	19.7	8.2
1933	32.8	24.9	31.9	56.8	23.9	6.9
1934	22.5	<u>1/</u> 17.7	32.9	50.6	19.8	12.2
1935	23.5	20.5	30.8	51.3	20.0	10.2
1936	23.5	18.1	31.3	49.4	<u>2/</u> 23.3	<u>3/</u> 13.2
1937	<u>3/</u> 25.4	<u>3/</u> 19.3	<u>2/</u> 26.1	<u>2/</u> 45.4	---	---
<u>Kentucky and Tennessee fire-cured, Type 22</u>						
1928-32						
5-yr. av.	117.7	93.3	<u>4/</u> 102.2	195.5	82.4	10.5
1932	99.0	78.6	124.3	202.9	58.7	6.6
1933	98.0	78.5	144.2	222.7	92.5	10.5
1934	88.5	<u>1/</u> 75.4	130.2	205.6	57.0	11.3
1935	83.0	68.1	148.6	216.7	82.0	9.7
1936	70.0	56.4	134.7	191.1	<u>2/</u> 77.5	<u>3/</u> 12.6
1937	<u>3/</u> 78.0	<u>3/</u> 63.4	<u>2/</u> 113.6	<u>2/</u> 177.0	---	---
<u>Kentucky and Tennessee fire-cured, Type 23</u>						
1928-32						
5-yr. av.	49.2	38.1	<u>4/</u> 27.9	66.0	38.8	7.4
1932	36.5	28.4	40.7	69.1	41.0	4.6
1933	33.5	22.0	28.1	50.1	18.0	6.8
1934	36.5	<u>1/</u> 29.5	32.1	61.6	21.1	8.9
1935	32.5	25.8	40.5	66.3	27.8	7.4
1936	30.5	23.2	38.5	61.7	<u>2/</u> 29.6	<u>3/</u> 9.1
1937	<u>3/</u> 34.0	<u>3/</u> 27.5	<u>2/</u> 32.1	<u>2/</u> 59.6	---	---
<u>Henderson fire-cured, Type 24</u>						
1928-32						
5-yr. av.	9.2	7.2	3.1	10.3	7.4	7.5
1932	5.0	3.9	4.8	8.7	4.2	3.4
1933	4.0	3.0	4.5	7.5	2.8	6.5
1934	4.5	<u>1/</u> 3.8	4.8	8.6	4.6	8.0
1935	3.6	3.0	4.0	7.0	3.5	6.4
1936	2.7	2.0	3.5	5.5	<u>2/</u> 3.5	<u>3/</u> 9.5
1937	<u>3/</u> 3.5	<u>3/</u> 3.0	<u>2/</u> 2.0	<u>2/</u> 5.0	---	---

1/ Quantity marketed.

2/ Estimated.

3/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.

4/ 4-year average, 1929-32.



Table 10.-Dark air-cured tobacco, types 35-37: Acreage, production, stocks, supply, disappearance, ratio of supply to disappearance, and price;  
average 1928-32, annual 1932-37

Year	Acreage : harvested :	Production : million pounds	Stocks : Oct. 1, million pounds	Total : supply : Oct. 1 million pounds	Disappearance : ance, year : beginning : Oct. 1 million pounds	Ratio of : total supply : to disap- pearance :	Season : average farm price per pound
1928-32	1,000 acres					Ratio	Gents
5-yr. av.	67.9	54.1	71.5	125.6	54.8	2.3	7.6
1932	45.5	36.5	82.5	119.0	40.1	3.0	4.1
1933	40.7	31.0	78.9	109.9	36.6	3.0	7.3
1934	45.6	38.3	73.3	111.6	41.9	2.7	7.6
1935	36.7	31.0	69.7	100.7	38.5	2.6	8.0
1936	34.2	24.7	62.2	86.9	2/ 39.8	2.2	3/ 15.4
1937	3/ 48.4	3/ 41.8	2/ 47.1	2/ 88.9	---	---	---

1/ Quantity marketed.

2/ Estimated.

3/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.

Table 11.--Dark air-cured tobacco: Acreage, production, stocks, supply, disappearance, and price, by types; average 1928-32, annual 1932-37

Year	: : Acreage : harvested :	: : Produc- : tion :	: : Stocks : Oct. 1, : farm-sales : weight :	: : Total : supply : Oct. 1 :	: : Disappear- : ance, year : beginning : Oct. 1 :	: : Season : average : farm price : per pound :
	1,000 <u>acres</u>	Million <u>pounds</u>	Million <u>pounds</u>	Million <u>pounds</u>	Million <u>pounds</u>	<u>Cents</u>
<u>One Sucker, Type 35</u>						
1928-32						
5-yr. av.	29.2	23.4	30.6	54.0	22.6	7.6
1932	19.3	15.5	36.8	52.3	19.0	4.8
1933	22.9	17.9	33.3	51.2	16.4	6.7
1934	21.2	<u>1/</u> 18.1	34.8	52.9	20.2	6.9
1935	15.6	13.0	32.7	45.7	16.9	8.2
1936	14.9	10.9	28.8	39.7	<u>2/</u> 15.5	<u>3/</u> 16.3
1937	<u>3/</u> 23.6	<u>3/</u> 20.6	<u>2/</u> 24.2	<u>2/</u> 44.8	---	---
<u>Green River, Type 36</u>						
1928-32						
5-yr. av.	33.6	27.3	35.5	62.8	28.3	7.6
1932	24.0	19.3	41.3	61.1	19.6	3.4
1933	15.0	11.1	41.5	52.6	16.7	7.9
1934	21.0	<u>1/</u> 17.5	35.9	53.4	19.1	8.1
1935	18.0	15.2	34.3	49.5	18.8	7.3
1936	16.0	11.2	30.7	41.9	<u>2/</u> 21.5	<u>3/</u> 14.5
1937	<u>3/</u> 21.0	<u>3/</u> 18.2	<u>2/</u> 20.4	<u>2/</u> 38.6	---	---
<u>Virginia sun-cured, Type 37</u>						
1928-32						
5-yr. av.	5.1	3.4	5.4	8.8	3.9	8.6
1932	2.2	1.2	4.4	5.6	1.5	6.6
1933	2.8	2.0	4.1	6.1	3.5	8.5
1934	3.4	2.7	2.6	5.3	2.6	9.7
1935	3.1	2.8	2.7	5.5	2.8	11.0
1936	3.3	2.6	2.7	5.3	<u>2/</u> 2.8	<u>3/</u> 15.1
1937	<u>3/</u> 3.8	<u>3/</u> 3.0	<u>2/</u> 2.5	<u>2/</u> 5.5	---	---

1/ Quantity marketed.2/ Estimated.3/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.

Table 12.-Cigar tobacco, all types: Acreage, production, stocks, supply, disappearance, ratio of supply to disappearance, and price:  
Average 1928-32, annual 1932-37

Year	Acreage : harvested	Production : million pounds	Stocks : Oct. 1, : farm-sales : weight 1/2/ : million : pounds	Total : supply : Oct. 1 : 2/ : million : pounds	Disappear- ance, year : beginning : Oct. 1 : 2/ : million : pounds	Ratio of : total supply : to disap- : pearance : Ratio	Season : average : farm price : per pound : Cents
1928-32	1,000 acres						
5-yr. av.	144.2	170.3	354.8	525.1	153.0	3.4	14.9
1932	131.7	150.1	427.2	577.3	164.0	3.5	7.8
1933	70.0	73.3	413.3	491.6	98.2	5.0	11.0
1934	56.8	73.2	393.4	466.6	103.8	4.5	16.8
1935	67.9	88.0	362.8	450.8	115.2	3.8	17.0
1936	73.2	98.1	332.3	430.4	118.6	3.6	4/ 19.6
1937	4/ 86.3	4/ 104.7	3/ 311.8	3/ 416.5	---	---	---

1/ Stocks held on farms not included. For Types 45, 61, and 62, stocks as of July 1.

2/ For Types 45, 61, and 62, total supply and disappearance for year beginning July 1.

3/ Estimated.

4/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.



Table 13.--Cigar tobacco: Acreage, production, stocks, supply, disappearance, and price, by types; average 1928-32, annual 1932-37

Year	Acreage harvested	Production	Stocks Oct. 1, farm-sales weight 1/	Total supply Oct. 1	Disappear- ance, year beginning Oct. 1	Season average farm price per pound
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Cents
<u>Pennsylvania Seedleaf, Type 41</u>						
1928-32						
5-yr. av.	40.1	48.5	98.9	147.4	45.4	8.9
1932	41.7	45.9	122.9	168.8	56.3	4.7
1933	22.0	21.4	112.5	133.9	29.9	5.0
1934	17.7	21.2	104.0	125.2	25.3	9.3
1935	20.5	28.2	99.9	128.1	25.9	11.0
1936	23.0	33.3	102.2	135.5	<u>2/</u> 26.0	<u>3/</u> 11.5
1937	<u>3/</u> 23.5	<u>3/</u> 27.0	<u>2/</u> 109.5	<u>2/</u> 136.5	---	---
<u>Miami Valley, Types 42-44</u>						
1928-32						
5-yr. av.	29.3	25.6	54.4	80.0	24.1	10.2
1932	30.3	24.2	66.0	90.2	27.8	4.0
1933	14.1	12.7	62.4	75.1	11.7	6.0
1934	13.6	16.3	63.4	79.7	13.9	8.6
1935	16.2	17.4	65.8	83.2	23.0	7.2
1936	14.0	13.2	60.2	73.4	<u>2/</u> 20.7	<u>3/</u> 9.5
1937	<u>3/</u> 17.5	<u>3/</u> 17.5	<u>2/</u> 52.7	<u>2/</u> 70.2	---	---
<u>Georgia and Florida sun-grown, Type 45 4/</u>						
1928-32						
5-yr. av.	1.2	1.2	<u>5/</u> 2.2	3.4	.8	17.0
1932	.3	.2	3.2	3.4	.7	10.0
1933	.1	.1	2.7	2.8	1.0	11.0
1934	.5	.6	1.8	2.4	1.2	12.0
1935	1.1	1.2	1.2	2.4	.2	13.5
1936	.8	.8	2.2	3.0	<u>2/</u> 1.5	<u>3/</u> 13.5
1937	<u>3/</u> 1.1	<u>3/</u> 1.2	<u>2/</u> 1.5	<u>2/</u> 2.7	---	---
<u>Connecticut valley Broadleaf, Type 51</u>						
1928-32						
5-yr. av.	11.2	16.5	33.9	50.4	15.2	19.9
1932	9.7	15.3	40.3	55.6	14.6	12.0
1933	7.4	11.1	41.0	52.1	12.3	13.0
1934	5.3	9.0	39.8	48.8	13.3	17.0
1935	6.3	10.7	35.5	46.2	12.0	18.5
1936	7.5	12.7	34.2	46.9	<u>2/</u> 13.2	<u>3/</u> 20.5
1937	<u>3/</u> 9.0	<u>3/</u> 14.9	<u>2/</u> 33.7	<u>2/</u> 48.6	---	---

Continued --

Table 13.-Cigar tobacco: Acreage, production, stocks, supply, disappearance, and price, by types; average 1928-32, annual 1932-37 - continued

Year	Acreage harvested	Production million pounds	Stocks Oct. 1, farm-sales weight 1/2	Total supply Oct. 1	Disappearance, year beginning Oct. 1	Season average farm price per pound
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Cents
<u>Connecticut Valley Havana Seed, Type 52</u>						
1928-32						
5-yr. av.	12.0	17.5	37.9	55.4	18.0	19.7
1932	11.2	17.5	40.9	58.4	19.8	8.5
1933	6.7	10.0	38.6	48.6	10.8	9.7
1934	3.6	5.9	37.8	43.7	12.9	15.6
1935	4.1	6.7	30.8	37.5	11.4	17.4
1936	4.9	8.3	26.1	34.4	2/ 11.5	3/ 17.9
1937	3/ 5.9	3/ 9.3	2/ 22.9	2/ 32.2	---	---
<u>New York and Pennsylvania Havana Seed, Type 53</u>						
1928-32						
5-yr. av.	1.7	1.9	3.1	5.0	1.6	11.9
1932	2.4	2.5	4.4	6.9	2.6	3.6
1933	.8	1.0	4.3	5.3	2.2	4.2
1934	.3	.4	3.1	3.5	1.5	8.2
1935	.5	.7	2.0	2.7	.7	10.3
1936	.8	1.1	2.0	3.1	2/ .8	3/ 11.0
1937	3/ 1.1	3/ 1.6	2/ 2.3	2/ 3.9	---	---
<u>Southern Wisconsin, Type 54</u>						
1928-32						
5-yr. av.	22.7	29.5	5/ 65.3	94.8	23.4	9.4
1932	19.2	25.0	80.8	105.8	25.6	4.5
1933	8.4	10.5	80.2	90.7	9.4	5.5
1934	5.2	7.2	81.3	88.5	14.9	6.0
1935	6.0	8.4	73.6	82.0	20.6	6.6
1936	7.2	11.0	61.4	72.4	2/ 21.5	3/ 8.0
1937	3/ 10.4	3/ 13.0	2/ 50.9	2/ 63.9	---	---
<u>Northern Wisconsin, Type 55</u>						
1928-32						
5-yr. av.	15.9	19.2	5/ 44.8	64.0	15.3	10.5
1932	10.0	12.5	52.2	64.7	9.6	3.8
1933	4.5	5.5	55.1	60.6	12.9	4.8
1934	3.6	5.3	47.7	53.0	11.5	8.4
1935	5.2	6.9	41.5	48.4	15.3	7.1
1936	6.0	8.1	33.1	41.2	2/ 13.8	3/ 12.0
1937	3/ 7.6	3/ 9.8	2/ 27.4	2/ 37.2	---	---

Continued -

Table 13.-Cigar tobacco: Acreage, production, stocks, supply, disappearance, and price, by types; average 1928-32, annual 1932-37 - continued

Year	Acreage harvested	Production million pounds	Stocks Oct. 1, farm-sales weight 1/	Total supply Oct. 1	Disappear- ance, year beginning Oct. 1	Season average farm price per pound
	1,000 acres	Millien pounds	Million pounds	Million pounds	Million pounds	Cents
<u>Connecticut Valley shade-grown, Type 61</u> <sup>4/</sup>						
1928-32						
5-yr. av.	6.9	6.9	9.9	16.8	5.9	72.6
1932	4.5	4.6	12.3	16.9	5.0	59.0
1933	4.7	4.8	11.9	16.7	5.7	64.0
1934	5.0	5.5	11.0	16.5	7.0	80.0
1935	5.7	5.7	9.5	15.2	7.0	85.0
1936	6.4	6.9	8.2	15.1	<u>2/</u> 6.9	<u>3/</u> 90.0
1937	<u>3/</u> 7.3	<u>3/</u> 7.5	<u>2/</u> 8.2	<u>2/</u> 15.7	---	---
<u>Georgia and Florida shade-grown, Type 62</u> <sup>4/</sup>						
1928-32						
5-yr. av.	3.2	3.5	<u>5/</u> 4.4	7.9	3.3	47.0
1932	2.4	2.4	4.2	6.6	2.0	35.0
1933	1.3	1.2	4.6	5.8	2.3	32.0
1934	2.0	1.8	3.5	5.3	2.3	60.0
1935	2.3	2.1	3.0	5.1	2.4	65.0
1936	2.6	2.7	2.7	5.4	<u>2/</u> 2.7	<u>3/</u> 65.0
1937	<u>3/</u> 2.9	<u>3/</u> 2.9	<u>2/</u> 2.7	<u>2/</u> 5.6	---	---

1/ Stocks held on farms not included. Data on farm stocks, which have a considerable bearing on disappearance in the case of cigar leaf, are not available.

2/ Estimated.

3/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.

4/ Stocks July 1, total supply July 1, and disappearance, year beginning July 1.

5/ 4-year average, 1929-32.



## THE OUTLOOK FOR FEED CROPS AND LIVESTOCK FOR 1938

### Summary

Supplies of both forage crops and feed grains will be more than sufficient in most of the important feeding areas of the Middle West to furnish ample rations for the livestock now on farms. Corn supplies are larger than in any recent year, and are near the 1923-32 average, whereas livestock numbers are considerably below average. Larger supplies of feed grains per animal are expected to result in heavier feeding of livestock now on farms, and an increased production of hogs, fat cattle, and dairy and poultry products. But even after allowing for this increased feeding, the carry-over of feed grains, especially corn, at the end of the 1937-38 marketing year may be well above average.

The general level of feed grain prices will average considerably below the high levels of 1934-35 and 1936-37, but may average slightly higher than 2 years ago. The level of corn prices may be about the same as 2 years ago, the price of oats is expected to average slightly higher, and the price of barley materially higher. Livestock-feed price ratios are expected to be favorable to producers of livestock during the coming winter and spring, and may remain favorable for another 2 or 3 years, if feed grain production continues near average.

The situation of the livestock producers and of farmers who use all of their own feed grain will be much more favorable than during the last few years. For those who sell a large part of their grain or buy most of their livestock, the situation will probably be somewhat less favorable than it has been during the last few years.

### FEED SUPPLIES

Total supplies of feed grains on October 1 (see table 9) were much larger than supplies on that date in any of the last 4 years, but 4 percent below the 1923-32 average. The apparent disappearance of feed grains on farms between July 1 and October 1 was 9,560,000 tons, which was 38 percent below the 1923-32 average for this period. The record low disappearance from July through September this year was due largely to the extreme shortage of corn supplies during this period and to the small number of hogs on farms. The scarcity of corn was only partly offset by relatively heavy feeding of oats, barley, wheat, and rye. The bulk of the wheat fed has consisted of lightweight wheat, although the relatively low price of wheat as compared with that of corn this summer resulted in a considerable feeding of wheat of millable quality. The 1937 production of feed grains per animal is above average in most of the important livestock-producing states. Drought has again curtailed production, however, in an area extending from northern Texas to Montana and North Dakota, and supplies of feed grains per animal will again be small in sections of this area, even after taking into consideration the greatly reduced livestock numbers.

## Feed Crops and Livestock - 2

The large cotton crop this year and the present low prices will probably again encourage some shift from cotton production to forages and feed grains in the South. Increased acreages of feed grains in this area may be at least partly offset by some further shift from feed grains to hay in the Corn Belt. The combined effect, however, of any material diversion of wheat and cotton acreages will be to increase supplies of feeds, either forage or grains. The general influence of these trends will be in the direction of increasing both forage and feed grain supplies in the South and forage supplies in the Corn Belt. Another factor which may tend to offset reductions in feed grain acreages in the next few years is the development of new types of corn. It is reported that in some of the Corn Belt States the adoption of new higher yielding varieties has made rapid progress in recent years, and that further increases are in prospect for the future.

The recently announced program of the Agricultural Adjustment Administration allows for an acreage of feed grains in 1938 not greatly below that of 1937. It is the aim of the Administration to assure adequate rations per animal, as well as to make allowance for the possibility of yields as much as 10 or 15 percent below average. A goal of 92,000,000 to 96,000,000 planted acres of corn has been set in connection with the Agricultural Conservation Program for 1938. This compares with a 10-year (1928-37) average area of about 102,500,000 acres, and with slightly over 97,000,000 acres in 1937. Acreage goals for oats, barley, and grain sorghums have not been set, but it is expected that there will be no attempt to change the acreages of these feed crops materially from the 1937 level.

### Feed-Grain Supplies

#### Corn: Supplies per animal large

The 1937 corn crop, on the basis of October 1 indications, will approximate 2,562,000,000 bushels. This is slightly above the 1928-32 average, and is more than 1 billion bushels larger than the very small crop of last year. Production in the 11 Corn Belt States is nearly double the very small production in these States last year, but is still about 4 percent below average (see table 1). In the eastern Corn Belt States and in Iowa and Minnesota a larger-than-average crop is in prospect. Production will be somewhat below average in South Dakota, and less than one-third of average in Kansas and Nebraska.

With the number of hogs on farms probably as much as 25 percent below average, and the number of grain-consuming animal units about 10 percent below, supplies of corn per hog and per grain-consuming animal are expected to be somewhat above average (see table 10). Despite the prospective increased feeding of hogs and other kinds of livestock, the comparatively large supply of corn relative to the number of livestock on farms is expected to result in a large carry-over of corn at the end of the 1937-38 marketing year. The carry-over may be unusually large in some of the Corn Belt States where production is above average and livestock numbers, especially hogs, are unusually small.

#### Oats: October 1 stocks near average

The total supply of oats available for feeding in 1937-38, including the October 1 indicated production and the July 1 carry-over, amounts to 1,243,000,000 bushels, which is about 9 percent below average, but 16 percent larger than the small supply last year. The disappearance of oats from July through September

### Feed Crops and Livestock - 3

was 25 percent below the average for 1928-32, and total stocks of oats on October 1 were 941,000,000 bushels compared with 734,000,000 bushels last year and 967,000,000 bushels for the 1928-32 average. This low disappearance, despite relatively low oat prices, was probably at least partly due to the fact that much of the oat crop would not be harvested until August, and supplies early in this period were small.

#### Barley and Grain Sorghums: Production below average

The 1937 barley crop is about 17 percent below the 1928-32 average, as a result of reductions in both acreage and yield, but is much larger than last year (see table 8). In many states yields are substantially below average on account of unfavorable growing conditions, and a below-average production is indicated for all the Corn Belt States except Missouri. Although no statistics are available on the July-September disappearance of barley, it was probably comparatively large, as it was more economical to feed barley than corn in most of the important feeding areas during this period. On the basis of October 1 indications, the grain sorghum crop of 97,299,000 bushels will be slightly below the 1928-32 average, but 75 percent larger than the very small crop of last year.

#### Wheat and Rye: Feeding reduced slightly from 1936-37

The total quantity of wheat already fed and still to be fed during the 1937-38 marketing year is now estimated at about 100,000,000 bushels, and the quantity of rye at about 7,000,000 bushels. These quantities are both slightly smaller than a year ago, but much larger than in the years just before 1930. The feeding of wheat has been rather extensive over much of the Corn Belt during the past few months, the price of wheat has been relatively lower than that of corn, and a larger quantity than usual has been light in test weight per bushel. Feeding of wheat and rye is expected to be reduced during the remainder of the 1937-38 marketing year, as new corn becomes available and the price of corn declines in relation to the prices of these grains.

#### Feedstuff Supplies for 1937-38 Larger than in Recent Years

Feedstuff supplies for the 1937-38 season are expected to be larger than supplies in recent years (see table 1). Increased production of grains and cotton will be important this year in increasing the supplies of millfeeds and cottonseed cake and meal available for feeding.

Supplies of wheat millfeeds may be about the same as for last season, but larger than for the three previous seasons, with a prospective increase in milling, since wheat production is materially larger. The larger domestic production of wheat millfeeds this season as compared with last year will probably be offset by reduced imports.

A substantial increase in supplies of high protein feeds over those of recent years is indicated for 1937-38. About 2,800,000 tons of cottonseed cake and meal will probably be turned out this season, almost 40 percent more than the output of last season. Considerable quantities of cottonseed cake and meal may be exported to Europe this season, but exports are not expected to be so large as during the 12 years, 1921-1932, when yearly shipments averaged almost 260,000 tons. Cotton production in other countries has expanded materially during recent years, providing considerably larger quantities of cottonseed and cottonseed cake and meal for European needs.



Supplies of soybean cake and meal this season may be about the same as for last season, provided farmers market about the same percentage of the indicated crop as they did in 1935-36 and exports of beans are small. About 60,000 tons of cake and meal were imported last season to supplement domestic supplies. Present indications are that supplies of linseed cake and meal will be about one-half as large as in 1936-37; but this will depend upon the quantity of cake and meal that will be retained from the crushing of imported flaxseed. Usually most of this cake and meal is shipped to Europe. Production of peanut cake and meal this season is expected to be as large as the relatively large production available last season, for the peanut crop is estimated to be almost as large as the crop harvested last year, and the diversion program of the Agricultural Adjustment Administration will tend to divert peanuts to crushers.

Gluten feed and meal supplies for 1937-38 are expected to be larger than during last season, when about 550,000 tons were produced. High prices for corn restricted corn grindings by the wet-process corn industry last season. The fact that corn grindings were larger during 1936-37 than 2 years earlier, even though corn prices were higher, reflected an improved demand for the main products of the industry. Supplies of distillers' and brewers' dried grains during 1937-38 may be larger than during 1936-37.

Table 1.- Feedstuffs: Supplies available for consumption  
in the United States, average 1928-29 to 1932-33,  
and annual 1933-34 to 1937-38

Year	High protein concentrates						Beet pulp	Gluten feed
	Wheat offal	Cotton- seed cake & meal	Soybean- cake and meal	Linseed- cake and meal	Other cakes and meals	Total oil cakes & meals		
Average	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1928-29 to	tons	tons	tons	tons	tons	tons	tons	tons
1932-33	3,935	2,070	114	315	109	2,603	186	598
1933-34	4,125	1,817	100	146	123	2,186	275	580
1934-35	4,347	1,662	287	207	232	2,388	222	456
1935-36	4,508	1,732	620	267	218	2,837	199	624
1936-37	4,714	2,056	1/550	1/275	1/249	3,129	252	2/551
1937-38 3/	4,700	2,650	550	150	190	3,540		

1/ Supplies for 3-month period, July-September, estimated.

2/ Preliminary.

3/ Prospective supplies for the 1937-38 season.

#### Hay Supplies per Animal Near Average

The 1937 hay crop of 24,519,000 tons, together with a carry-over of 6,011,000 tons from last year, provides somewhat larger supplies per animal unit than were available in most recent years, but about the same as for the 1928-32 average (see table 9). The 1937 crop is larger than the 1938-32 average in most eastern and southern States, but is only average or below in the Great Plains and most of the western States.

An important factor in the present situation is the comparatively small crop of clover-timothy hay west of the Alleghenies. This has been largely offset by increased crops of alfalfa, lespedeza, and annual hay crops. In the West North Central States, where wild hay is important, production this year is only a little below the 1928-32 average. Hay supplies per hay-consuming animal are somewhat above the 1928-32 average in nearly all sections east of the Mississippi River, but are below average throughout most of the West.

The quality of the hay crop throughout the United States is below average this year, owing both to weeds and to weather damage at harvest time. The greatest deterioration from weather has occurred in the region east of the Mississippi River, where unfavorable weather during the curing season made it difficult to cure the hay without some damage.

Table 2.- Hay production and supply per animal unit,  
1928-29 to 1932-33 average,  
yearly, 1933-34 to 1937-38

Area and year	Production		Stocks	Seasonal	Seasonal
	Tame hay	Wild hay	on farms: May 1	supply	supply per animal unit
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	Tons
United States:					
Av. 1928-29 to 1932-33	70,146	10,719	9,720	90,585	1.15
1933-34	66,530	3,412	10,927	85,869	1.00
1934-35	55,270	4,729	7,594	67,593	.84
1935-36	78,133	11,383	4,934	94,460	1.12
1936-37	63,303	6,915	13,724	83,943	1.07
1937-38 1/	74,576	9,943	6,011	90,530	1.15
States East of the Mississippi River:					
Av. 1928-29 to 1932-33	33,738	594	4,796	39,128	1.39
1933-34	32,713	666	4,667	38,051	1.27
1934-35	29,533	645	3,534	33,712	1.10
1935-36	40,784	627	3,365	44,776	1.47
1936-37	32,138	721	7,100	39,959	1.31
1937-38 1/	39,573	824	3,499	43,896	1.44
States West of the Mississippi River:					
Av. 1928-29 to 1932-33	36,407	10,125	4,893	51,426	1.06
1933-34	33,812	7,746	6,260	47,818	.91
1934-35	25,737	4,084	4,060	33,881	.61
1935-36	37,354	10,761	1,569	49,684	.99
1936-37	31,171	6,194	6,624	43,989	.89
1937-38 1/	35,003	9,119	2,512	46,634	.97

1/ Preliminary.

## LIVESTOCK NUMBERS AND FEED REQUIREMENTS

Present indications as to probable numbers of livestock on farms on January 1, 1938, as compared with a year earlier, point to no material change in the aggregate of grain-consuming units. Cattle numbers are expected to show some decrease and those of other livestock may be slightly smaller. In view of the greatly increased supplies of feed available compared with those of last year, feeding of livestock will be much more extensive during 1937-38 than in 1936-37. Hogs will be marketed at heavier weights, dairy cattle and poultry will be fed more liberally, and the number of beef cattle fattened on grains and other concentrates will be greatly increased.

Favorable feeding ratios in prospect

Supplies of livestock for slaughter during 1938 and 1939 are expected to remain relatively small compared with average supplies from 1925 to 1929, although they will tend to increase as hog production in the western Corn Belt expands to a more nearly normal volume. It will probably be 1940, however, before hog production increases sufficiently to bring total livestock supplies up to the 1925-29 relationship to feed grain production, assuming that such production continues near average. Although consumer incomes during 1938 and 1939 may be below the 1925-29 average, livestock supplies also will be below this average and prices of livestock are expected to average not much below the 1925-29 level. Such a level of prices would result in a ratio between meat animals and feed prices more favorable to feeders than the average for 1925-29, and much more favorable than the average for 1934-37 (See Table 4).

A favorable situation is in prospect during the next 2 or 3 years for livestock producers who raise stocker and feeder classes of livestock for selling and for farmers who use their own feed grains. For feeders who buy all or most of the livestock they feed and for farmers who sell feed grains the situation is somewhat less favorable. Farmers who buy both feed grains and feeder cattle may not be in a favorable position, since the competition for unfinished livestock to be fed is likely to result in very narrow margins between the prices of feeding animals and of animals finished for slaughter.

From the standpoint of the relationship of present feed supplies to total livestock numbers, the situation of most livestock producers is more favorable than it has been for several years. Nebraska and Kansas are the only Corn Belt States where the supply of feed grains per animal is below average. In the Corn Belt States east of the Missouri River the supply of feed grains in relation to the number of animals to be fed is much above average. States having the largest increases over average and over last year in the quantity of corn per animal are North and South Dakota, Minnesota, Illinois, Iowa, and Missouri. In the first two States the number of animals now on farms is very much below average, which accounts for the fact that the increase in feed per animal is so much larger than in other States where livestock have not been so greatly reduced.



Prospective sharp increases in livestock numbers

The larger feed supplies available in 1937-38 will cause hog producers to retain more brood sows for farrowing in the spring and fall of 1938 than in 1937, thereby increasing the number of hogs to be fed in 1938-39. There will also be some restocking of cattle herds if crop and pasture conditions in 1938 are fairly favorable.

The number of livestock, including poultry, on farms January 1, 1937, in terms of grain-consuming units, was about the same as on the corresponding dates of both 1936 and 1935, but was 11 percent smaller than the January average during 1930-34. The decrease from this 5-year average principally represented reductions in hog numbers and in horses and mules. Cattle numbers increased sharply during most of the 1930-34 period, and at the beginning of 1934 were the largest on record, but much of the increase has since been liquidated as a result of the droughts. The tendency to expand hog production which started in the fall of 1935, following the very sharp curtailment in 1934 and the spring of 1935, was checked by the drought of 1936, with the result that the spring pig crop of this year was 7 percent smaller than that of the previous year. The 1937 fall pig crop probably will not be greatly different from the fall crop of last year. In June hog producers indicated that they would keep 3 percent fewer brood sows for fall farrowing than they did in 1936.

FOREIGN FEED GRAIN AND LIVESTOCK SITUATION

Prospects are favorable for a considerable increase in European imports of overseas feed grains and feedstuffs during the remainder of the current crop year. A substantial part of such imports probably will be obtained from the United States. The 1937 production of feed grains in importing countries is not greatly different from that of 1936, but in the major exporting countries, excluding the United States and Soviet Russia, it is substantially below that of last year.

Feed grain production in Europe

The production of feed grains this year in Europe, excluding Soviet Russia, is estimated to have been reduced by about 3,300,000 tons, and is about 7 percent smaller than last year's below-average crop. Moreover, the carry-over from last year's crop has been reduced to a very low level. The smaller production this year resulted from smaller crops in the exporting countries of the Danube Basin and in Poland, as production in the rest of Europe is estimated to equal that of 1936.

The only European countries, other than Soviet Russia, that have a surplus of feed grains this year are those located in the Danube Basin. Poland, normally an exporter of rye, oats, and barley, has such poor crops this year that it is expected to import grains later on.

The European production of root crops, such as potatoes and sugar beets, is expected to be somewhat larger this year than in 1936, which will offset to some extent the reduction in supplies of feed grains.

Feed requirements in Europe

European hog numbers around the middle of 1937 were approximately the same as a year earlier, but because of unfavorable hog-feed ratios and the inability to import all feed supplies that are needed, hogs are expected to decrease during the coming year. Cattle numbers, on the other hand, appear to be approximately 5 percent larger than in 1936, and any liquidation of cattle that may occur will undoubtedly be slower than in the case of hogs.

Apparent total requirements of feedstuffs in Europe during 1938, therefore, would appear to be not greatly different from those of 1937. Because of the disappointing rye crop, however, and the conservation of rye for bread purposes in several countries, particularly Germany, it would appear that European imports of feed grains may be somewhat larger than in 1937. Furthermore, the reduced surplus of feed grains for export from the Danube Basin and the probable lack of any exports from Poland during the current crop year point to a material increase in European imports of overseas feed grains.

Supplies of feed grains in the major exporting countries in 1937-38, including the Danube Basin, Argentina, and Canada, but excluding the United States and Soviet Russia, are expected to be smaller by about 4-1/2 million tons or about 12 percent as compared with the previous year. This estimate assumes that the Argentine corn acreage harvested will be approximately the same as last year and that average yields will be obtained. Supplies of old-crop corn in Argentina are well below those of a year ago and are expected to be largely disposed of by the time the United States crop is ready for market. The new Argentine crop will not be ready until about March 1938, so that the United States is expected to become an important exporter of feed grains, particularly corn, during the latter part of 1937 and the early part of 1938.

The ability of the United States to take advantage of the prospective winter demand for feed grains in Europe will depend to a considerable extent upon the relation of United States corn prices to prices of substitute feeds, such as rye and barley, of which Soviet Russia is a potential exporter. Production of feed grains in Russia this year is materially larger than in 1936. Russia, therefore, appears to be in a position to supply at least a part of any considerable demand for oats, barley, and rye that may arise. Exports of corn from Russia, however, have never been large and are not expected to offer much competition with American corn this winter.

The price of La Plata corn at Liverpool for the week ended September 22 was 87.2 cents per bushel. At this price, December futures of corn at Chicago appear to be approaching an export basis. Exports of oats and barley have increased sharply since the harvesting of the 1937 crops. Preliminary estimates of exports from July through September are as follows: barley, 3,900,000 bushels; oats, 1,250,000 bushels; and rye, 1,400,000 bushels.

Table 3- Feed Production: European importing countries, average -  
1931-35, and yearly 1935-37

Item	: 1931-35 : average	: 1935	: 1936	: 1937
	: 1,000	1,000	1,000	1,000
	: short tons	short tons	short tons	short tons
Corn.....	5,384	5,180	5,894	6,283
Oats.....	26,263	25,094	24,662	24,912
Barley.....	14,624	14,381	13,445	13,999
Rye.....	23,454	23,135	21,893	20,778
Total .....	69,725	67,790	65,894	65,972
Potatoes.....	146,445	141,878	152,879	154,322
Sugar beets.....	44,444	45,780	48,827	51,588

Feed Production: Major exporting countries, excluding the United States  
and Soviet Russia, average 1931-35, and yearly 1935-37

Item	: 1931-35 : average	: 1935	: 1936	: 1937
	: 1,000	1,000	1,000	1,000
	: short tons	short tons	short tons	short tons
Corn.....	22,856	23,293	25,983	24,273
Oats.....	8,545	8,611	7,232	6,945
Barley .....	5,317	4,878	5,744	5,294
Total .....	36,518	36,782	38,959	36,512

## FEED PRICES

Prices of all feeds are expected to average much lower during the 1937-38 marketing year than during last season, as a result of the much larger supplies of all feed grains and feedstuffs. Livestock-feed price ratios are expected to be favorable for livestock feeding during the coming winter and spring, as the reduction in feed grain prices is expected to be relatively greater than any declines that may be anticipated in livestock prices. The general level of feed grain prices, however, may average slightly higher than 2 years ago, reflecting an improvement in livestock prices and a higher level of wholesale prices. The average of livestock prices and of feed grain prices for the years 1924-36, and the ratio of feed grain prices to livestock prices is shown in table 4. Compared with 1924-29, feed grain prices for 1937 production will be much lower. If feed grain production in 1938 and 1939 should be about equal to that of 1937, prices for those years will probably not be any higher than prices for the 1937 crop, as such a volume of production would be large relative to the probable livestock production during those years.

During the greater part of the last marketing year, prices of all feed grains and feedstuffs have been at the highest level in more than 10 years as the result of the curtailment in supplies caused by the 1936 drought. Corn prices during most of the 1936-37 marketing year have been relatively higher than oat prices, and have been unusually high compared with both oat and barley prices during the summer months.

## FEED GRAIN PRICES

Corn: Prices this winter near those of 2 years ago

The price of No. 3 Yellow corn at Chicago declined 75 cents per bushel between the seasonal high weekly average of 138 cents reached in May to the average for the week ended October 16.



Table 4 - Livestock - feed grain ratio, 1925-29 and 1934-37, average, and yearly, 1925-1937

Year	Total live weight of live- stock slaughtered 1/	Average price per 100 pounds of livestock slaughtered 2/	Production of feed grains 5/ 3/	Average price of feeds grains per 100 pounds 4/	Ratio prices meat animals to feed grains 5/
	Million pounds	Dollars	Million cwt.	Dollars	
1925.....	21,031	9.69	1,573	1.78	5.4
1926.....	21,330	10.00	1,876	1.26	7.9
1927.....	21,094	9.60	1,647	1.30	7.4
1928.....	21,369	10.05	1,707	1.50	6.7
1929.....	21,122	10.54	1,843	1.42	7.4
5-year average	21,189	9.98	1,729	1.45	6.9
1930.....	20,223	9.05	1,686	1.38	6.6
1931.....	20,466	6.26	1,536	1.03	6.1
1932.....	19,815	4.34	1,704	.60	7.2
1933.....	21,473	4.14	1,982	.53	7.8
1934.....	21,385	4.71	1,487	.95	5.0
1935.....	17,262	7.62	871	1.47	5.2
1936.....	20,886	7.85	1,647	1.06	7.4
1937.....	6/18,572	6/9.00	6/1,030	1.67	5.4
Average 1934-37	19,526	7.30	1,259	1.29	5.7
1938.....			7/1,783		

1/ Live weight of cattle, calves, hogs and sheep slaughtered under Federal inspection.

2/ Average cost to packers of livestock slaughtered under Federal inspection.

3/ Corn for grain, oats and barley. The production is for the preceding year, i. e., grain production in 1924 is shown with slaughter in 1925.

4/ The average annual farm price for the crops of each year. The price shown for 1925 is the average price for the 1924 crops.

5/ Average price of livestock divided by average price of feed grains.

6/ Estimated.

7/ Preliminary.

Although the average price of corn this winter will probably be somewhat below the early October level, it now appears that the greater part of the downward adjustment in corn prices has taken place. The 1937-38 supply of corn is expected to be more than 250 million bushels larger than supplies in 1935-36, but the average farm price this winter may not be greatly different from the average 2 years ago. The influence of the higher wholesale price level and the higher prices of livestock and livestock products may largely offset the influence of larger supplies of corn this year. Regional prices, however, may vary considerably from those of 2 years ago, reflecting differences in the distribution of the crop in the two years.

Although a material downward adjustment in corn prices is taking place for all regions of the United States, declines will be much greater in some regions than in others. As the result of the severe shortage of corn in the western Corn Belt States last year, the price of corn in this area averaged from 10 to 20 cents higher than in the eastern Corn Belt and in the Middle Atlantic States. With the distribution of supplies by regions more nearly normal this year, corn prices may again be expected to be lower in the Corn Belt States than in other regions. Hence the largest declines in corn prices from the high point last spring will occur in areas of the Corn Belt where supplies of corn per animal will be large. In the last 12 years, when corn supplies have been comparatively large in Iowa and other central Corn Belt States, the average price received by Iowa farmers has been about 8 to 10 cents lower than the average United States price and as much as 20 to 30 cents lower than prices on the Eastern Seaboard. With livestock numbers reduced in these Corn Belt States, a similar situation seems probable for the present marketing year.

Table 5.—Corn: Weighted average price per bushel of No. 3 Yellow, Chicago, 1933-34 to date

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
1933-34:	40.2:	44.4:	46.5:	49.7:	48.6:	43.9:	47.3:	51.3:	52.4:	64.1:	76.1:	80.0
1934-35:	77.9:	83.4:	93.3:	90.8:	87.7:	83.3:	89.0:	87.6:	85.1:	84.8:	80.6:	83.2
1935-36:	82.0:	62.1:	59.0:	60.8:	61.3:	60.8:	63.2:	63.2:	64.0:	85.8:	113.6:	112.1
1936-37:	106.6:	104.7:	107.2:	112.2:	111.2:	116.0:	135.0:	134.9:	122.4:	118.4:	104.5:	105.9
1937-38:	:	:	:	:	:	:	:	:	:	:	:	:

The severe winter of 1936-37 caused a comparatively heavy disappearance of corn, and was largely responsible for the sharp advance in corn prices in April 1937. The advance at that time caused livestock feeding ratios to continue unfavorable in contrast to the rather sharp improvement in feeding ratios in the spring of 1935.

Although the seasonal trend of corn prices varies greatly from year to year, reflecting changes in livestock prices and in the wholesale price index, there seems to be a general tendency for corn prices to make more

than an average decline from October to December in years like the present, when a large or an average crop follows a small crop. In these years there is also a tendency for the seasonal advance in prices to begin later in the marketing year than under average conditions. Prices next summer and fall will be influenced partly by supplies currently available and partly by prospects for the 1938 crop. If crop prospects next summer indicate a production again near average, corn prices may make little advance in the summer, and prices for the 1938 crop may average somewhat lower than for the 1937 crop, since supplies will be further increased by the prospective larger carry-over from the 1937 crop.

Oat prices: Downward adjustment largely completed

Oat prices declined sharply during July and August as larger supplies became available from the 1937 crop, and it now appears that much of the downward adjustment has taken place. No great changes are in prospect during the fall and winter months. The below-average disappearance of oats from July through September, together with lower corn prices, may have a depressing influence on oat prices during the remainder of the marketing year, and tend to limit any seasonal advance. Oat prices have been unusually low relative to corn prices during the last few months, but when the corn prices are finally adjusted to a new crop basis, prices of corn and of oats are expected to reach a more nearly normal relationship.

Table 6.-Oats: Weighted average price per bushel of No. 3 White, Chicago, 1933-34 to date

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
1933-34:	39.2	35.5	35.0	32.0	33.6	34.6	36.7	36.0	33.3	31.8	34.7	43.4
1934-35:	44.8	48.9	55.4	52.5	54.1	55.7	56.3	54.1	49.0	49.5	43.6	39.2
1935-36:	36.1	29.2	29.7	29.8	29.0	29.3	30.0	30.3	27.8	27.6	26.6	28.4
1936-37:	37.2	44.3	43.6	42.1	46.0	50.4	53.6	51.5	51.2	54.4	52.2	48.0
1937-38:	39.3	30.3	32.2	:	:	:	:	:	:	:	:	:

Barley: Prices near the low point for 1937-38 season

In the period May - July, barley prices declined sharply as new crop supplies became available. For the week ended August 21 the price of No. 3 barley reached a weekly average low of 59 cents a bushel. There has been some improvement in prices since that time despite declining corn prices, and it now appears that barley prices may have reached the low point for the 1937-38 season. This conclusion is further supported by a continuation of the active demand from breweries, and by the comparatively large exports in prospect. In view of these factors, barley prices may average somewhat higher than corn prices during the coming winter and spring months. Relatively low corn prices may tend to prevent the usual seasonal advance in barley prices during the first half of 1938.



Table 7.—Barley: Weighted average price per bushel, No. 3 at Minneapolis, 1933-34 to date

Year	:Aug.	:Sept.	:Oct.	:Nov.	:Dec.	:Jan.	:Feb.	:Mar.	:Apr.	:May	:June	:July
	:Cents:	Cents:	Cents:	Cents:	Cents:	Cents:	Cents:	Cents:	Cents:	Cents:	Cents:	Cents:
1933-34:	55.9:	65.5:	62.2:	58.6:	64.2:	65.1:	65.9:	66.3:	67.0:	66.0:	81.6:	79.0
1934-35:	92.3:	101.9:	97.0:	101.0:	105.1:	103.8:	103.0:	95.1:	93.4:	81.2:	66.7:	54.0
1935-36:	48.1:	53.1:	52.1:	50.2:	51.9:	59.7:	61.9:	57.8:	57.9:	54.5:	58.7:	85.2
1936-37:	114.5:	124.1:	122.4:	116.5:	120.9:	124.7:	124.2:	110.4:	114.6:	103.0:	76.7:	70.7
1937-38:	61.1:	67.8:	:	:	:	:	:	:	:	:	:	:

Feedstuff Prices may average near 1935-36 level

Feedstuff prices during the 1937-38 season will be materially below the high prices of last season, but may average about the same as in 1935-36, even though supplies are considerably larger than 2 years ago. Higher prices of livestock and livestock products and a higher general price level are expected at least to offset the relatively larger supplies. Export demand for high protein feeds is also a factor in domestic markets this season. Feedstuff prices early in October this year averaged 25 percent below prices a year ago, but were 5 percent higher than 2 years ago.

High protein feeds are expected to sell at less than the usual premiums over corn during the 1937-38 season. During much of the past year cottonseed meal prices at middle-western markets were lower than corn prices on account of the scarcity of corn. During the 8 years previous to the 1934 drought, oil cake and meal supplies averaged 2.4 percent of the total feed supplies, and the price per ton at Chicago during December for 41 percent protein cottonseed meal averaged about 50 percent higher than for No. 3 Yellow corn. During 1936-37, cake and meal supplies were 4.4 percent of the total feed supply, and during December 1936 a ton of cottonseed meal at Chicago sold only 5 percent higher than No. 3 Yellow corn. This year, cake and meal supplies are expected to be about 3.5 percent of the feed supply, or about 50 percent larger in relation to feed grain supplies than the average for the 8 years prior to the 1934 drought.

Hay Prices about \$2 per ton lower than a year ago

The United States average price of all tame hay declined more than \$3 per ton from May 15 to August 15 this year, as a result of much larger supplies. The September price was nearly \$2 per ton below that of a year earlier, and prices during the remainder of the hay-marketing year are expected to average well below the prices of 1936-37. This year, however, prices will probably be maintained somewhat above the low level of 2 years ago, when production was somewhat larger, and when monthly farm prices fluctuated between \$7 and \$8 per ton from September to June.

## THE FEED GRAIN SITUATION BY REGIONS

The indicated supplies of feed crops in relation to the livestock to be fed were larger, and the condition of pastures was better over a greater part of the country this year than in any year since 1932. The only large section where there is a shortage of feed and pasturage is the area extending from Montana and North Dakota southward into some of the northern counties of Texas. Much of the area in southern Texas also has been short of rainfall during the last 6 months. With a more nearly normal distribution of supplies, feed grain prices in different areas of the country are expected to assume a more nearly normal relationship.

Great Plains and Western Corn Belt - The Great Plains region, which was most seriously affected by the droughts of 1934 and 1936, experienced another adverse year in 1937. The drought this year has been most severe in northeastern Montana, northwestern North Dakota, and the "dust bowl" area that centers in southwestern Kansas and extends into northwestern Oklahoma, the northern tip of the Texas Panhandle, most of western Nebraska, and a large area in southeastern Colorado. The production of corn this year in Kansas and Nebraska, although much larger than last year, will be less than one-third of the 1928-32 average. Small grains, hay, and pasture in these States also were seriously affected by the drought. Grain sorghum is the only crop in this section that will be near average.

Although the supplies of feed are drastically curtailed in the Great Plains States, it may not be necessary to move any large quantities of feed into this region during the coming winter. The liquidation of livestock numbers in this region during other recent drought years has been very great. Kansas and Nebraska are the only States in which the quantity of corn produced in relation to hog numbers in the States is smaller than the average of the 5 years, 1928-32. In North Dakota the corn crop in relation to hog numbers is larger than average.

The current shortage of feed grains in the part of the Corn Belt west of the Missouri River will continue to restrict cattle feeding in this area, which normally is an important source of supply of grain-fed cattle for slaughter, but which produced relatively few such cattle in 1937. The poor condition of pastures and ranges and the shortage of hay in the States west of the Missouri River will further delay re-stocking of farms, where herds were greatly reduced in the last 4 years because of drought.

Central and Eastern Corn Belt - The supply of feed grains in the Central and Eastern Corn Belt this year will be about 5 percent larger than the 1928-32 average. Hay supplies in this area are indicated to be about 10 percent larger than average and other forage supplies will be abundant. But dry weather late in the season lowered pasture conditions rather seriously in Wisconsin, and to a lesser extent in local areas of other States.

Because of the small number of hogs raised this year, these States will have an unusually large surplus of corn. Farmers in this area, however, may not find the usual demand from other areas for corn, because most of the other areas also have a larger than usual supply of locally grown feeds. Although some replenishing of commercial stocks and an increase in the quantity of corn processed are in prospect, only a very small percentage of the total will be absorbed, and most of the surplus must either be fed in the Corn Belt or held as farm stocks. Of the States in this area the increase over average in the production of corn per hog is greatest in Illinois, Missouri, and Minnesota. From present indica-

tions, it appears that supplies of corn per hog in these three States, based on the small pig crops and the small numbers at the beginning of the present year, will be more than 50 percent above average. In Iowa, supplies per hog are estimated to be more than one-third above average. The combined production of Iowa and Illinois will amount to about 34 percent of the United States production this year, compared with about 28 percent last year, and an average of 30 percent during 1928-32.

Livestock-feed price ratios are expected to be favorable to livestock production in the Corn Belt during the 1937-38 marketing year. This will result in the feeding of hogs to heavier-than-average weights, the fattening on grain of more than the usual number of cattle, a more liberal feeding of dairy cows, and a marked increase in pigs raised in 1938.

Southern States - Food supplies of all kinds in the Southern States, particularly the South Atlantic States, are considerably larger this year than in any recent year. With a large cotton crop, the supplies of cottonseed meal and cottonseed cake will be plentiful and prices low in relation to those of livestock and livestock products.

North Atlantic States - With relatively abundant supplies of feed grains again available for shipment from the Corn Belt, farmers in the North Atlantic States will be in a position to purchase dairy and poultry feeds during the next 12 months at prices lower than in 1936-37. In spite of lower feed prices, however, eastern dairymen and poultrymen will not be in as an advantageous a position in relation to middlewest producers as during the past year, when imported feed grains were delivered to the Atlantic Seaboard at lower prices than those quoted for feeds from the Corn Belt. But although eastern dairymen and poultrymen may expect strengthening competition from the middlewestern States, the feed grain-butterfat price ratio will probably encourage some increase in the production of dairy products in the eastern States during the next year.

Western States - Except in parts of Idaho and New Mexico, fall range and pasture conditions have been fair to good this year in the areas from the Rocky Mountains westward. The supply of hay in these States is slightly less than last year, but larger than in 1934 and 1935. Present indications are that the supply of feed grains will be slightly larger than last year, but slightly smaller than that of 1935. The production of barley in California is about 5 percent below that of last year.



Table 8-All Corn: Production in the United States by geographical divisions, 1928-32 average, yearly 1933-37.

Year	North	East	West	Total	South	South	South	Western	Total
	Atlantic	Central	Central	Central	Atlantic	Central	Central	Central	States
1928-32 av.	79,924	731,060	1,175,985	1,907,045	161,002	370,605	1,000 bu.	36,197	2,554,772
1933.....	87,600	622,159	1,120,961	1,743,120	179,993	354,547	1,000 bu.	34,372	2,399,632
1934.....	90,097	496,498	397,879	894,377	168,125	296,513	1,000 bu.	12,011	1,461,123
1935.....	103,104	783,602	814,172	1,597,774	199,536	378,702	1,000 bu.	24,631	2,303,747
1936.....	89,791	535,599	389,474	925,073	171,860	320,547	1,000 bu.	22,056	1,529,327
1937 <sup>1</sup> /.....	101,025	902,694	930,475	1,833,169	201,705	403,439	1,000 bu.	22,598	2,561,936

Oats: Production by geographical divisions, 1928-32 average, yearly 1933-37

Year	North	East	West	Total	South	South	South	Western	Total
	Atlantic	Central	Central	Central	Atlantic	Central	Central	Central	States
1928-32 av.	61,297	405,592	607,532	1,013,124	24,882	74,924	1,000 bu.	40,874	1,215,102
1933.....	46,574	230,373	346,348	576,721	22,092	46,337	1,000 bu.	41,442	733,166
1934.....	56,810	184,645	178,483	363,128	22,791	67,726	1,000 bu.	31,851	542,306
1935.....	60,516	329,149	649,101	978,250	27,441	82,918	1,000 bu.	45,777	1,194,902
1936.....	50,885	270,346	354,356	624,702	22,664	52,214	1,000 bu.	38,635	789,100
1937 <sup>1</sup> /.....	51,935	356,179	604,799	960,978	26,879	69,702	1,000 bu.	42,939	1,152,433

Barley: Production in important producing States, 1928-32 average, yearly 1933-37

Year	Wis.	Minn.	Iowa	N. D.	S. D.	Neb.	Calif.	Total
								United States
1928-32 av.	22,178	49,615	17,882	39,055	35,277	15,336	1,000 bu.	1,000 bu.
1933.....	17,710	28,070	9,280	17,902	3,451	8,390	29,594	281,237
1934.....	18,534	21,815	4,901	7,810	1,685	1,818	26,174	153,767
1935.....	25,548	59,798	15,264	42,840	41,964	15,130	26,078	116,680
1936.....	17,896	31,620	7,056	4,522	8,977	5,520	36,983	285,774
1937 <sup>1</sup> /.....	21,783	51,000	13,361	28,176	23,674	10,822	29,925	147,452
							28,350	232,878

<sup>1</sup>/ October 1 estimate.

Table 9 - Supplies of feed grains and hay, numbers of grain consuming and hay consuming animal units on farms, and supplies of feed grains and hay per animal unit, 1920-21 to 1937-38

Marketing year	: : Supply of : feed : grains : Oct. 1 : 1/	: Grain : consuming: : animal : units : on farms : Jan. 1 2/	: Supply of : feed grains: : per grain : consuming : animal : unit	Marketing year	: : Supply : of : hay : 3/	: Hay : consuming: : animal : units : on farms : Jan. 1 4/	: Supply of : hay per : hay : consuming : animal : unit
	: : 1,000 : tons	: : Thousands	: : Tons		: : 1,000 : tons	: : Thousands	: : Tons
1920-21	: 118,423	120,777	.98	: 1920-21	: 100,978	86,873	1.16
1921-22	: 112,209	120,976	.93	: 1921-22	: 101,182	86,110	1.18
1922-23	: 103,235	127,241	.81	: 1922-23	: 104,687	84,660	1.24
1923-24	: 105,735	123,605	.86	: 1923-24	: 100,784	82,826	1.22
1924-25	: 91,989	119,173	.77	: 1924-25	: 102,155	80,373	1.27
1925-26	: 103,750	113,885	.94	: 1925-26	: 91,557	77,869	1.18
1926-27	: 100,963	114,713	.88	: 1926-27	: 85,225	75,484	1.13
1927-28	: 102,374	119,078	.86	: 1927-28	: 106,640	74,441	1.43
1928-29	: 105,023	116,833	.90	: 1928-29	: 98,000	75,332	1.30
1929-30	: 97,827	114,724	.85	: 1929-30	: 95,953	76,838	1.25
1930-31	: 87,215	114,706	.76	: 1930-31	: 84,133	73,036	1.08
1931-32	: 99,222	119,799	.83	: 1931-32	: 82,448	79,861	1.03
1932-33	: 115,985	124,455	.93	: 1932-33	: 92,390	82,874	1.11
1933-34	: 94,591	123,596	.77	: 1933-34	: 85,869	85,907	1.00
1934-35	: 61,972	102,766	.60	: 1934-35	: 67,593	80,909	.84
1935-36	: 92,147	105,082	.88	: 1935-36	: 94,460	80,086	1.18
1936-37	: 64,693	103,979	.62	: 1936-37	: 83,248	78,702	1.07
1937-38	: 96,961	5/104,000	.93	: 1937-38	: 90,530	5/78,000	1.16

1/ Includes total stocks of corn and oats October 1, plus total production of corn, barley, and grain sorghums in each of the years considered.

2/ Number of animals, excluding poultry, on farms January 1, weighted as follows: milk cows, 1.00; other cattle, 0.51; hogs, 0.87; sheep, 0.04; horses and mules, 1.14.

3/ Total production of tame and wild hay plus carry-over on May 1.

4/ Number of animals, excluding poultry, on farms January 1, weighted as follows: milk cows, 1.00; other cattle, 0.75; sheep, 0.12; horses and mules, 1.00.

5/ Preliminary estimate.

Table 10 - Corn production in relation to the number of pigs saved, 1928-32 average, and yearly 1934-37

State and region	Corn per pig saved <sup>1/</sup>									
	Quantity					Expressed as a percent				1937
						-age of 1928-32 avg.				quantity
	1928-32:	1934	1935	1936	1937 <sup>2/</sup>	1934	1935	1936	1937	as per-
	avg.									centage
	Bush.	Bush.	Bush.	Bush.	Bush.	Pct.	Pct.	Pct.	Pct.	Pct.
United States...	33	24	42	23	41	73	127	70	124	178
North										
Atlantic:	56	77	81	60	63	138	145	107	113	105
E. North										
Central:	38	29	51	29	50	76	134	76	132	172
W. North										
Central:	39	14	36	14	39	48	124	48	135	279
Total North										
Central:	32	20	42	20	44	62	131	62	138	220
South										
Atlantic:	33	40	40	30	33	121	121	91	100	110
South										
Central:	41	35	43	30	40	85	104	73	98	133
Western ...	11	7	12	8	10	64	109	73	91	125
Ohio.....	31	28	47	30	39	90	152	97	126	130
Indiana....	32	24	40	25	39	75	125	78	122	156
Illinois...	50	29	67	39	76	58	134	78	152	195
Michigan...	35	36	66	30	51	103	189	86	146	170
Wisconsin...	28	35	35	16	33	125	125	57	118	206
Minnesota...	25	21	45	21	44	84	130	84	176	210
Iowa.....	30	20	38	19	42	67	127	63	140	221
Missouri....	26	7	22	11	41	27	84	42	158	373
N. Dakota...	16	8	46	3	31	50	288	19	194	1033
S. Dakota...	22	8	42	5	37	36	218	23	168	740
Nebraska...	34	5	37	7	30	15	109	21	88	429
Kansas.....	35	5	23	6	23	14	66	17	66	383

<sup>1/</sup> Annual production of corn per pig saved from the combined spring and fall pig crops.

<sup>2/</sup> Preliminary.



## THE DAIRY OUTLOOK FOR 1938

### Summary

The coming winter (1937-38) will probably be one of the most favorable for dairy production since 1930, the Bureau of Agricultural Economics points out in the annual dairy outlook report.

Production of feed grains and hay in 1937 was large in relation to livestock numbers, and feed prices during the current feeding season will average decidedly less than a year earlier. Prices of dairy products in the fall months of 1937 have been higher than in the same months of 1936, and in the winter, 1937-38, will probably average about the same, or somewhat higher, than in the winter of 1936-37. Milk production per cow is likely to average the highest since the winter of 1931-32, and total milk production from October 1937 through May 1938 is expected to show an increase of 3 to 5 percent over the preceding feeding period, most of this increase occurring after January 1. Domestic prices of dairy products are not expected to be sufficiently high in relation to world prices to attract butter imports in the winter months of 1937-38 larger than in the corresponding period of 1936-37.

During the next 3 or 4 years conditions in the dairy industry are likely to average better than during the last 4 or 5 years. The number of milk cows per capita is somewhat below average and no marked increases are probable during 1938. Rising prices for milk cows in 1938 and possibly in 1939, and fairly high prices for dairy products, will tend to increase the numbers of heifers saved and may reduce culling, particularly in the intensive dairy States.

In most general farming areas the tendency will be to increase the production of hogs, beef cattle, and veal, rather than milk, so long as the price of meat animals continues high. After livestock numbers (which have been reduced by droughts) return to normal there is likely to be only about the usual spread between feed costs and average prices of all livestock and livestock products instead of the very favorable relationship expected during the winter of 1937-38. However, during the next two years, at least, the relation of feed prices to prices of dairy products seems likely to be rather favorable for dairymen.

### The Short-Time Outlook

During the coming winter milk-cow numbers will probably average about the same or slightly higher than in the preceding winter, but except for 1936-37, the lowest since the winter of 1931-32.

Production of feed grains in 1937 is 62 percent larger than in 1936, but about the same as the 10-year average before the drought year 1934. Hay production per animal unit is above the average of recent years. Since the total number of livestock on farms is below average, and feed supplies are quite large in proportion to the numbers of animals to be fed, it is expected that feeding will be fairly liberal during the current feeding season, and still leave a normal carry-over at the end of the feeding period.

Milk production per cow is likely to average rather high, probably the highest since the winter of 1931-32. From October 1 through May, total milk production is likely to average around 3 to 5 percent higher than in the preceding

feeding period, with most of the increase occurring after January 1. This will represent a per-capita production close to that of the last 10 years, but the highest since the drought of 1934.

A decline of feed prices in relation to dairy products has already occurred, and during the coming winter the relationship between prices of feeds and dairy products will be much more favorable for dairy producers than during the past winter. Prospects are that prices of dairy products during the coming winter will average somewhat higher than in the winter of 1936-37, and that they will be the highest since the winter of 1929-30. In the past year, there has been an increase in the general level of commodity prices and a rise in pay rolls in relation to the cost of living, which will probably more than offset the effect of larger dairy production on prices.

Increases in the consumption of fluid milk and cream in cities and villages will tend to offset, in part, the effect of the larger production of milk on the production of manufactured dairy products.

Stocks of manufactured dairy products in storage were slightly above average on September 1, and total supplies available for consumption during the coming winter will be larger than a year earlier. On a per-capita basis, however, supplies will be only about average. Imports of dairy products during the winter and spring of 1937-38 are expected to approximate those of the corresponding periods of 1936-37.

#### The Long-Time Outlook

##### Prospects moderately favorable.

Conditions seem to be moderately favorable for dairying during the next several years. The number of milk cows, which is now 6 percent less than the peak of 4 years ago, appears to have passed the low point but is still somewhat below average in proportion to population. The number of heifers and heifer calves being raised is only slightly above average in relation to milk cows, and current reports on numbers of calves and cows being marketed do not indicate any material change in milk-cow numbers before the end of 1938. Nevertheless, the situation is one of unusual uncertainty for, partly because of the great reduction in hog slaughter and the resulting reduction in total meat supply, the prices of meat animals are unusually high compared with prices of other farm products.

In the past, cattle prices have moved in cycles with the peaks about 15 years apart. In 1885, 1899, 1915, and 1930 cattle prices were at a high point compared with prices of other things. If the present cycle were of the same length, the next peak in cattle prices might be expected in 1945. However, there is strong reason to believe that the present cattle-price cycle will be somewhat different from those preceding, for the recent droughts greatly hastened the reduction in cattle numbers and reduced hog production to the lowest levels in many years.

##### Prices of milk cows rising.

In general, the prices of milk cows and young stock tend to rise and fall with changes in the price of beef cattle, but during the next year or so, as after the 1934 drought, prices of the various classes of cattle probably will not move together. The temporary shortage of fat cattle is so great that prices for the better grades of cattle will probably reach a peak the fall of 1937. With a larger hog slaughter and a larger total meat supply in prospect for the latter

part of 1938, some individual farmers will be inclined to liquidate part of their cattle holdings to take advantage of the current high prices, but if the price of cattle continues high, as seems probable, a point may soon be reached at which a largely increased number of farmers will begin to hold back breeding stock to increase their herds, thus reducing the marketings of cows and heifers. . Therefore, reduced marketings during the next year or so seem likely to support cow prices, and it is possible that the peak of milk-cow prices may not be reached until 1938 or 1939.

Although prices of most meat animals are high, prices of milk cows have not as yet shown a comparable increase. However, with average feed supplies, it is expected that milk-cow prices will be high enough to cause some increase in heifer calves saved for milk cows beginning in 1938, but it would be more than 2 years later before the milking herd would be increased by these additions. The number of milk cows in herds also can be increased by reduced cullings and by increasing the number of beef and dual-purpose cows milked. The culling of dairy herds, especially in the more specialized dairy States may be less than during the last few years. On the other hand, during the next year or so there will probably be more of an incentive to expand beef and pork production than dairy production, and this will tend to prevent the increase of dairy herds by the use of more cows of beef and dual-purpose type and may result in a shifting of some of those now being milked to beef production.

#### Price relationships favor increased feeding.

Although the number of milk cows may continue somewhat low in relation to population for a few years, the relationship of dairy-product prices to feed costs is likely to result in more liberal feeding than in the years just past and a somewhat larger production of milk per cow.

During the past 85 years, there have been violent fluctuations in the relationships between prices of butterfat and prices of feed grains, but the long-time tendency has been for butterfat prices to rise in relation to feed grains. Butterfat prices have been unusually low in relation to feeds since the short crops of 1934 and 1936. If feed supplies should be about average during the next few years, a more normal price relationship between butterfat and feed grains will be established. This will tend to re-establish the upward trend of dairy production.

#### Prices of manufactured dairy products.

During the last 41 years the total production of manufactured dairy products (milk equivalent) per capita has fluctuated between a peak of 513 pounds in 1896 and a low of 387 pounds in 1918. In the 5-year period (1925-29) production per capita averaged 464 pounds. These fluctuations in production have been small compared with the fluctuations in prices. The major fluctuations in prices of dairy products have been somewhat the same as the fluctuations in the general level of prices of basic commodities or all commodities. Wholesale prices of manufactured dairy products are relatively low compared with the general level of commodity prices, but the long-time outlook is for some rise in this relationship. Any factors that cause a rise or fall in the general level of prices will affect prices of dairy products in the same way.

#### Milk and cream consumption increases.

Fluid milk, cream, and ice cream were the only important dairy products the consumption of which declined during the depression. At present, however, the trend in consumption of these products is upward. Estimated consumption of fluid milk and cream in cities and villages in 1936 was only slightly less than the pre-



depression peak in 1929. The outlook for the next 5 years is for further increases in the consumption of these products. Consumption of ice cream has increased rapidly from the depression low, and consumption in 1937 will probably exceed the preceding peak in 1929. The general trend in ice-cream consumption will probably continue upward.

The long-time trend in per-capita consumption of manufactured dairy products as a whole has been upward. This increase has been due primarily to increased per-capita consumption of ice cream, concentrated milks, and cheese. Since the 1890's there has been no consistent tendency for the per-capita consumption of butter to increase or decrease.

Year-to-year changes in the consumption of oleomargarine are affected by the margin between retail prices of butter and oleomargarine. During the last few years, however, the consumption of oleomargarine has been high in relation to this price margin. During this period, prices of lard have been high in relation to prices of oleomargarine, and this probably stimulated oleomargarine consumption as a lard substitute.

#### The Outlook in Regional Areas

Although the normal trend of milk production is upward, about parallel with population growth, rather marked regional differences are to be expected. Principal increases in commercial dairy production during the next several years are expected in the specialized dairy sections, including some of the newer areas where there has been a marked upward trend in production. The present tendency appears to be moderately upward in most States along the northern border from New England westward through Minnesota, but in Illinois and Indiana and portions of some of the other States, the relatively high prices of beef cattle and hogs may retard dairy expansion for 2 years or more, except where the product can be sold as market milk. In some sections, particularly from central Ohio eastward, there has been, and is likely to continue, a tendency to increase the size of individual dairy herds, but this may soon be offset by a decrease in the number of herds, due in part to the further abandonment or consolidation of some of the poorer and rougher farms.

#### Expansion probabilities in Northeast.

In most of the Northeastern area considerable expansion is probable as a result of further increases in the local demand for fresh milk and cream. This will be possible only by more intensive methods of production which may involve relatively higher costs. The relatively heavy production in the Northeast during the last 12 months appears to be due in part to the importation of large quantities of corn, for this has helped to keep feed prices from rising relatively as much in the Coastal States as in interior States.

Further expansion of dairying in the bluegrass- and lespedeza-growing areas of Virginia, Kentucky, Missouri, Tennessee, and North Carolina is probable, although increases in dairying in these States may not be material so long as the price of beef cattle continues high.

#### Some increase in the South.

In the main Cotton Belt there has recently been a substantial increase in the number of share-cropper and other farmers keeping one or more milk cows and there has been some expansion of dairying particularly following periods of low prices for cotton. Increased local consumption of dairy products, pasture

improvement, elimination of cattle ticks, and improvement of dairy cattle may bring about some further increases in local dairying. These changes will facilitate further shifting from the production of farm-made butter for sale to delivery of milk and cream to commercial plants. Although the long-time trend of milk production in the South is upward, it may be paralleled by increased local consumption which is still rather low.

#### Corn Belt shift towards hogs and beef.

In the western Corn Belt, and particularly in States where drought has caused a great reduction in dairy herds and in incomes, some increases in milk cows are to be expected as normal feed supplies are restored. In this area the tendency in recent months has been to wean the calves early and to milk a larger than usual proportion of the cows, but this tendency is probably temporary. Prices of both beef cattle and hogs are now high in comparison with butterfat, and there probably will be only a moderate increase in commercial milk and butterfat production until the price of beef cattle declines. If the export market for hogs is not regained, however, dairying may in time become of increasing importance in parts of this area, particularly, in northern Iowa and parts of Missouri. In Nebraska and South Dakota some recovery in the number of milk cows is to be expected in areas where extreme reductions were caused by the droughts, but an increase in the number of cattle and sheep fed seems more probable than a marked increase in dairying.

#### Mountain and Pacific States.

In the Mountain and Pacific States the number of milk cows and the output of dairy products will probably increase with the extension of irrigation, the development of the area, and the local increase in population. Looking some years ahead, a rather large increase in production in the more favored sections seems probable, but there are as yet no indications that in the region as a whole production is likely to exceed local needs.

Putting these regional views together it seems that production in practically all States is likely to be expanded enough to provide for local increases in market-milk requirements. Increases in milk production for butter and cheese manufacture are to be expected chiefly in Wisconsin, Minnesota, and northern Iowa, and in other Corn Belt States, and along the northern edge of the Cotton Belt. As in some of these areas butterfat production competes directly with beef cattle and hogs, there seems to be good reason to expect fairly favorable returns from butter, so long as these competing products continue high enough to check dairy expansion.

#### Foreign Competition and Demand

Indications are that domestic prices of butter in the United States in relation to world prices will not attract larger imports of foreign butter in the winter months of 1937-38 than those in the corresponding period of 1936-37. Australian dairy production, following 2 years of severe drought, had not recovered fully during the early months of the current production season. Any such recovery later in the season would contribute greatly to the widening of the margin between London and New York butter prices. On the other hand, an extension of unsettled conditions in Europe would tend to limit imports of dairy products in the United States. Imports of all dairy products in excess of exports amounted in the year ended June 30, 1937, to the equivalent of 958,000,000 pounds of milk, or slightly less than 1 percent of the total consumption within the United States.

National control schemes devised in foreign countries to aid the dairy industry during the depression period appear to have had their most pronounced



effect in the encouragement of production of butter for export. In butter-exporting countries, with scarcely an exception, price-maintenance has operated within the country, leaving the surplus to be sold at world prices.

Further increased butter consumption in Great Britain not probable.

The consumption of butter in Great Britain has greatly increased during recent years, but further substantial increases in consumption are not probable unless butter prices in that country should be low enough to place the United States on an import basis. Great Britain absorbed approximately 83 percent of all butter moving in international trade in 1935 and 1936 as compared with 70 percent in 1931. Should New Zealand and Netherlands even maintain their present record volume of surplus butter supplies and should Australian production at the same time recover to that of recent normal years, it is apparent that consumption in Great Britain could not be sufficiently further increased to absorb it except at prices so low as to place United States markets on an import basis.

Canadian cheese output increases.

In Canada, cheese production is much heavier this season to date than in the corresponding period of 1936 which was a year of the largest production since 1932, and the first year since then to have shown any considerable increase. During the first 8 months of this year as compared with last, Canadian butter production is officially estimated to have declined 2 percent and cheese production to have increased 15 percent. However, owing to the relative strength of British cheese markets, they have taken, and may be expected to continue to take, the bulk of Canadian cheese exports. During the first 6 months of 1937 the United States received only 2,779,000 pounds from Canada, as against 3,826,000 pounds in the corresponding period of 1936.

Reduced duties in some countries.

Reductions by foreign countries of duties on United States dairy products, or assurances against increases in existing rates of duty, have been obtained for dairy products in 9 of the 16 trade agreements now in effect. The 9 agreements that contain concessions relating to dairy products are those with Canada, France, Brazil, Columbia, Costa Rica, Guatemala, Haiti, Honduras, and Nicaragua. During recent years the items directly benefited by concessions or assurances have accounted for about two-thirds of the total value of United States exports of dairy products to these 9 countries and have made up about 6 percent of the total value of exports of dairy products to all countries.

Concessions by United States.

The only dairy products upon which the United States has granted reductions in import duties in the trade-agreements program are cheese and cream. Concessions on cheese were granted to Canada, Netherlands, France, Switzerland, and Finland. In each case the concession was limited to the types of cheese characteristic of the producing country. The duty concessions on cheese apparently have had no measurable effect upon the level of cheese prices in the United States. Domestic demand in 1936 and 1937 has increased sufficiently to absorb increases in both domestic production and imports at prices somewhat higher than those prevailing before the making of the concessions, all of which became effective during 1936. The reduction to Canada in the duty on cream was limited to an annual quota of 1,500,000 gallons, of which only about 6 percent had been imported during the first 8 months of 1937.



Milk Control and Regulatory Programs

During the last few years there has been an increase in public regulation of milk production and marketing, some regulations representing an effort to benefit dairymen financially, and others aimed to secure more healthful city milk supplies.

Laws provide for increased regulation.

By the fall of 1937, some 19 States had adopted laws providing for the regulation and control of milk distributors in the buying and selling of fluid milk and cream. In general, these laws provided for licensing milk distributors and fixing prices of milk and cream. Federal regulation of the handling of milk is now in effect in 22 milk markets, the principal feature of these programs being the regulation of prices paid producers by handlers. There are also in effect Federal marketing agreements covering dry skim milk and evaporated milk.

Most of the State milk-control laws are of a permanent nature, although several of them were enacted under emergency declarations. The future of price-fixing features of Federal milk control depends largely upon Court decisions, but such phases as provision for more adequate market information, regulation of market and trade practices, and protection for producers in the matter of payments for milk are likely to continue.

Sanitation ordinances more stringent.

Laws and ordinances relating to milk sanitation and inspection are becoming more stringent, especially in the larger milk markets. Strict sanitary provisions for milk alone should lead to an increase in the price of milk for fluid use relative to prices of milk for use in manufactured dairy products. It is possible, however, that during the next few years there may be a further tendency for States to adopt stricter sanitary requirements for milk and cream to be used in manufactured dairy products.

Federal conservation and relief.

The soil conservation program has been in effect 2 years and plans have been announced for its continuance in 1938. Dairy farmers may qualify for payments under this program by diverting land from soil-depleting to soil-conserving crops and by adopting soil-improvement practices. The long-time effect of the soil conservation program probably will be to encourage some degree of shift from the production of feed grains to hay, pasture, and soil-improving crops, with corresponding shifts in the kinds of livestock. The increase in the production of roughage, will tend to offset the reduced quantities of feed grains.

The purchase of dairy products for relief distribution has tended to strengthen the market in some temporary periods of surpluses. It appears, however, that the purchase programs have been and are likely to be of short-time significance rather than major factors in determining the average level of prices for dairy products during a whole year.

Disease-control programs expanded.

Both the Federal and State Governments have recently been more active in the control of diseases of dairy cattle. The bovine-tuberculosis program has been greatly expanded, and significant progress has been made in the control of Bang's disease. The short-time effect of disease-elimination programs is to hold in check the numbers of cows kept for milk on farms. Over a longer period of time these programs should result in greater efficiency of operation and lower costs of

production.

### Trends in Marketing Dairy Products

During the decade of the 1920's there were important developments in the manufacturing and marketing of dairy products. Among these was a tendency toward large-scale organization, as exemplified by the rapid growth in the size of dairy corporations, as well as producer cooperatives marketing dairy products.

#### Changes in transportation and merchandizing methods.

This development in organization, together with the greater use of the motortruck, tended to make possible more direct methods of marketing, in the sense that larger percentages of dairy products moved directly from the producing areas to the secondary consuming markets. In this process, the functions of the specialized wholesaler and jobber in the large terminal markets have been taken over to an increasing extent by large-scale distributors. Improvements in processing methods and in refrigeration and transportation facilities, together with advertising and educational programs, have tended to widen and expand the outlets for dairy products. The newer methods of merchandising have stressed consumer packages, and have been an important factor in developing a consumer demand for the higher qualities and grades of dairy products.

#### Emphasis on higher quality.

During the depression the growth in the size of corporations handling dairy products was arrested, at least temporarily. The trend toward more direct marketing methods is continuing, however, and appears likely to do so for several years. There probably will be increasing attention to the production, manufacture, and distribution of higher quality dairy products. More interest is developing in consumer grades for food products in general, including dairy products. Another development likely to continue during the next several years is the increased production of milk by-products, both for food and for industrial uses.

#### Problems arise from changes.

In general, the developments in marketing during the past decade or so probably have helped to increase the consumption of dairy products, and, in some cases at least, to reduce costs of manufacturing and distribution. On the other hand, they have made the problem of price determination increasingly difficult and they account, in part at least, for the increased public interest in the regulation of prices, in marketing charges, and in methods and practices in the marketing of dairy products.

Release Date  
November 6 - A.M.

## THE OUTLOOK FOR POULTRY AND EGGS FOR 1938

In sizing up the poultry, egg and turkey outlook for next year, the Bureau of Agricultural Economics expects:

The feed-egg price situation to improve from the producers' viewpoint, and by early 1938 to be much more favorable than a year earlier;

The spring hatch in 1938, therefore, to be greater than the spring hatch in 1937;

Poultry marketings to be less than those of a year earlier from July 1937 to June 1938 because of the small 1937 hatch, and to exceed marketings in the remainder of 1938 because of the larger 1938 hatch;

Poultry consumption, therefore, to be under that of a year previous in the period July 1937 to June 1938 and to be above for the remainder of 1938;

Fall and winter broiler production, 1937-38, to be heavy but prices are not expected to be correspondingly depressed except possibly for short periods in view of the smaller supplies of other meats;

Poultry storage stocks, first half of 1938 to be above average because of the heavy summer carry-over in 1937 but much below 1937 because of the lower marketings;

Turkey production in 1937 to be about 10 percent less than the record crop of 1936;

The turkey hatch in 1938 to be greater than the hatch in 1937 because of a better feed situation;

Turkey prices in the fall of 1937 to be above those of 1936 and possibly above 1935 and to decline in the fall of 1938 with the prospective larger crop;

Chicken prices, because of the above prospective conditions, to advance in the period July-December 1937 and although expected to be above 1937 during the first half of 1938, they will probably be under during the last half;

Laying-flock size to reach a cyclical low point early in 1938;

The rate of egg production per hen in 1938 to be under that of 1937;

Egg marketings in 1938, therefore, to be less than in 1937;

Egg storage stocks, last half of 1938, to be much less than in 1937, because of smaller marketings;

Egg prices throughout 1938 to be above corresponding periods of 1937 because of the prospective supply situation.



The Outlook for 1938The feed situation

Total production of the four feed grains - corn, oats, barley, and grain sorghum - in 1937 will be the largest since 1932. As the carry-over from 1936 was small the total supply will not be so large as the production estimates would indicate. Wheat production was also large and the supply available for poultry feeding will be larger than during recent years. With other livestock numbers very low, the supply of grain per grain-consuming animal, with few exceptions, will be larger than in any of the last 15 years. Supplies per animal will be unusually large in some of the Corn Belt States where livestock numbers were greatly reduced.

The relationship of feed prices to egg prices is important to the poultryman in at least two respects; (1) in the fall it influences the number of pullets saved for the laying flock, and (2) in the spring it influences the size of the hatch. Throughout the year it may influence the rate of production of eggs. During most of 1937 about 50 percent more eggs than average were required to buy 100 pounds of feed. In September the feed-egg ratio was only 30 percent above the 1925-34 average and was below 1936. During the first half of 1938 the feed-egg ratio is expected to be much lower than in the same months of 1937 and may go below the 1925-34 average. In other words, the feed situation next spring will be much more favorable than in 1937.

The feed-egg ratio at Chicago, by selected weeks  
(Dozens of eggs required to buy 100 pounds of poultry ration)

Year	Week ended as of 1937											
	: Jan. :	Feb. :	Mar. :	Apr. :	May :	June :	July :	Aug. :	Sept. :	Oct. :	Nov. :	Dec. :
	: 9 :	6 :	6 :	3 :	1 :	5 :	3 :	7 :	4 :	2 :	6 :	4 :
	: Doz. :	Doz. :	Doz. :	Doz. :	Doz. :	Doz. :	Doz. :	Doz. :	Doz. :	Doz. :	Doz. :	Doz. :
Average	:	:	:	:	:	:	:	:	:	:	:	:
1925-34	:4.06	5.08	6.20	6.23	6.43	6.98	6.71	6.38	5.68	5.02	3.97	3.64
	:	:	:	:	:	:	:	:	:	:	:	:
1936	:5.22	4.70	5.11	6.48	6.01	5.60	6.32	7.71	7.99	7.37	5.85	5.92
1937	:7.76	9.16	9.17	9.72	10.80	11.23	10.18	8.90	8.17	7.08		

Spring hatchings

Because of this lower feed-egg ratio expected for early 1938, an increase in the hatch over 1937 is likely. That laying flocks are likely to be the lowest of record, since 1925, will also be important in increasing hatchings.

Chicks and young chickens in farm flocks June 1, and salable chicks  
hatched in commercial hatcheries, 1929-1937  
(1934 = 100)

Item	: 1929 :	1930 :	1931 :	1932 :	1933 :	1934 :	1935 :	1936 :	1937 :
	: Pct. :	Pct. :	Pct. :	Pct. :	Pct. :	Pct. :	Pct. :	Pct. :	Pct. :
Young chickens	:	:	:	:	:	:	:	:	:
on farms .....	:111.2	117.1	102.3	105.0	111.5	100.0	99.4	110.9	94.7
Commercial hatch...	:118.5	142.8	104.8	108.2	117.0	100.0	124.7	156.1	127.2

Poultry marketings

Receipts of dressed poultry at the four markets (New York, Chicago, Boston, and Philadelphia), were larger in the first half of 1937 than a year before. This is partly due to a larger out-of-storage movement than in 1936 and partly due to a greater reduction in flock size than in 1936. Because of the small flocks now, and the light hatch, receipts from the middle of 1937 to the middle of 1938 are likely to be less than in the corresponding periods a year earlier. Because of the prospective heavier hatch in 1938, receipts during the last half of that year are likely to exceed those of 1937.

Fall and winter broilers

Because of the small marketings of farm broilers in 1937 and the less-than-average seasonal increase in broiler storage stocks, the prices of fall and winter broilers are expected to remain high, relative to the same months of recent years. Although production of fall and winter broilers (a small part of total supply) may be the largest of record, the price-depressing effect of this is likely to be offset to a great extent by the effect of small supplies of meat. The same assurance with regard to heavy broiler production in the fall and winter of 1938-39 cannot be given, in view of the expected increase in the 1938 hatch.

Poultry storage

Stocks of frozen poultry in storage when the peak is reached in early 1938 are expected to be much less than in 1937 but above the 1925-34 average. The increase in stocks from September 1 to February 1, is not likely to be so great as average because of reduced receipts during this period. On the other hand, September 1 stocks are 20 million pounds above average because of a heavy carry-over from the 1936-37 storage season. Some of this carry-over stock is reported to be of inferior quality and so far has not had a great competitive effect on farm poultry prices.

## United States storage stocks of frozen poultry

Year	: September 1	: Into storage : : Sept. 1-Feb. 1	: February 1
	: Million pounds	: Million pounds	: Million pounds
Average	:	:	:
1925-26)	: 42,584	75,004	117,583
1934-35)	:		
1936-37	: 65,488	112,316	178,304
1937-38	: 63,769		

Poultry consumption

Consumption of poultry in the first half of 1937 was greater than in the first half of 1936. This is indicated by (1) the exceptionally large out-of-storage movement in this period, and by (2) a greater reduction in laying flocks from January 1 to July 1 than was the case in 1936. The increase in poultry canning was not enough to offset these two indications.

Consumption of poultry during the last half of 1937 will very likely be less than in the same period of 1936, largely because of smaller marketings. With storage stocks on January 1, 1938 expected to be much less than a year earlier, consumption in the first half of 1938 will probably continue low. Consumption in the last half of 1938, however, may be greater than a year earlier.

### Turkey production and price

Turkey production in 1937 as indicated by the number of turkeys on hand on September 1, is expected to be about 10 percent less than the record crop of 1936. Many small producers and some large ones have discontinued production entirely but large increases have been made by commercial producers in some States. Much of the variation in numbers on hand in different parts of the country reflects the feed situation in those regions, some of the biggest reductions being in drought areas.

#### Reduction from 1936 in turkeys on hand September 1

Division	:Reduction :from 1936	:	Division	:Reduction :from 1936
	<u>Percent</u>	:		<u>Percent</u>
New England	0	:	East South Central	6
Middle Atlantic	1	:	Pacific Coast	6
South Atlantic	1	:	West North Central	18
West South Central	2	:	Mountain	23
East North Central	4	:		<u>9.5</u>

As the cost of feed with which the 1937 turkey crop will be finished for market will be lower than in 1936 and as the price received for the turkeys will in most instances be higher, the production of turkeys for sale in the fall of 1938 is expected to be increased.

Although the smaller crop in 1937 will tend to raise turkey prices in the fall and early winter of 1937 above those of 1936 and possibly above those of 1935, the larger hatch likely next year will probably bring turkey prices in the fall of 1938 below those of 1937. A small increase in consumer incomes would tend to offset this decline to some extent.

#### United States farm price of turkeys per pound

Year	:October:	November:	December	: January
	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>
Average :				
1925-34 :	20.8	22.5	22.8	22.2
1935-36 :	15.9	19.9	21.3	19.9
1936-37 :	15.9	15.0	14.3	14.1
1937-38 :				

### Chicken prices

With fewer poultry, both turkeys and chickens, to be marketed in the last half of 1937 than a year earlier, chicken prices in that period are expected to



exceed those of the same months of 1936 and possibly to be above the 1925-34 average. In most years chicken prices decline in the last half of the year. The seasonal decline in 1937 has been replaced by an advance.

Farm price of chickens per pound

Year	Jan.	Mar.	May	July	Sept.	Nov.
	Cents	Cents	Cents	Cents	Cents	Cents
Average:						
1925-34:	16.8	17.5	18.3	17.8	17.3	16.2
1935	12.4	14.2	15.7	14.0	15.4	15.9
1936	16.5	16.6	16.6	16.1	14.9	13.2
1937	13.4	14.4	14.8	15.3	17.4	

Although poultry storage stocks in the first half of 1938 will probably be less than in the first half of 1937, the effect of this on chicken prices in this period may be offset somewhat by a possible small decline in consumer income. Though chicken prices in this period are expected to be greatly above those of 1937, they are not likely to exceed the 1925-34 average.

In the last half of 1938 the depressing effect on chicken prices of the prospective increase in hatchings may be partly offset by possible advances in consumer income. Chicken prices then are expected to be somewhat below those of the last half of 1937. There is no basis now for anticipating a seasonal decline in this period greatly different from average.

#### Laying-flock size

The number of hens and pullets of laying age per farm flock ordinarily decrease by about 25 percent from January 1 to September 1. In 1937, this decline was 29 percent, bringing laying-flock size down to the level of 1936, while in January it had been 4 percent greater.

Hens and pullets in farm flocks on the 1st day of month

Year	Jan.	Mar.	May	June	Aug.	Sept.	Oct.	Dec.
	Numbers	Numbers	Numbers	Numbers	Numbers	Numbers	Numbers	Numbers
Average :								
1925-34 :	87.5	84.7	77.4	73.4	66.8	66.1	70.4	81.9
1935 :	78.3	75.8	69.1	65.1	59.2	58.5	65.1	76.6
1936 :	80.6	76.7	70.5	66.5	60.0	59.9	66.9	79.1
1937 :	84.2	80.0	73.1	68.5	62.1	59.9	64.3	

The size of the laying flock on January 1 is largely influenced by the number of young chickens on hand 6 months earlier, and by the feed-egg-ratio in the last half of the year. The effect of the 19-percent reduction from 1936 in young chickens, making fewer pullets available to add to the laying flock, will be only slightly off set by a somewhat more favorable (lower) feed-egg-ratio than in 1936, so that the laying flock on January 1, 1938 is expected to be much smaller than in 1936 and probably smaller than in 1935.

With a more favorable feed situation in 1938 than 1937, it is expected that the laying flock will be built up by less rigorous culling and by heavier hatching. Laying-flock size in the past has fluctuated quite regularly in 3-year cycles, the last low point being in the winter of 1934-35. It seems likely that the winter of 1937-38 will mark another such low point and that by the fall of 1938 laying flocks will be larger than in the fall of 1937.

### Rate of egg production

Favorable weather in most of the heavy production season, more rigid culling than usual, and a laying flock with a high proportion of pullets resulted in an exceptionally large number of eggs laid per hen in the period January 1 to September 1, 1937. In 1938, with culling probably less rigid and with a smaller proportion of pullets than in 1937 the rate of production is likely to be lower than in 1937.

Eggs laid per 100 hens and pullets of laying age in farm flocks

Year	: Jan.	: Mar.	: May	: July	: Sept.	: Total	: Oct.	: Dec.
	: Number	: Number	: Number	: Number	: Number	: Jan.-Sept.	: Number	: Number
Average :								
1925-34 :	16.5	38.4	55.1	42.2	32.4	347.8	25.0	13.9
:								
1936 :	19.1	32.6	56.5	44.2	31.4	349.5	25.1	16.0
1937 :	22.0	39.2	57.8	44.4	36.1	370.9	28.8	

### Egg marketings

Larger flocks and an increased rate of production made marketings in the first 8 months of 1937 slightly larger than in 1936. During the remainder of 1937 marketings from fresh-egg production are likely to be less than in 1936 because of smaller flocks and lower prices. Egg receipts at the four markets (New York, Chicago, Philadelphia, and Boston) however, may equal that of a year ago because of the large stocks in cold storage. Following the movement of these stocks into consumption, after mid-winter of 1938 marketings will reflect current production and are likely to be much lower than in 1937 until the fall of 1938.

### Egg storage

The midsummer peak in cold-storage stocks of shell and frozen eggs in 1937 was about 25 percent above that of 1936 and was only exceeded in 1930. These large stocks were largely a result of an increased supply of eggs and a somewhat stronger incentive to store than existed in 1936. These influences are likely to be reversed in 1938, production probably being lower than in 1937 and the storage incentive likely to be weakened by a less profitable storage season than 1935-36. Hence, storage stocks in 1938 are expected to be much less than in 1937.

### Egg prices

The large storage stocks have tended to keep egg prices in the fall of 1937 below those of the same months of 1936. The seasonal peak in November or December is not likely to be as high as a year earlier.

Shell and frozen eggs in cold storage on the 1st day of the month  
Converted to shell-egg equivalent 1/

Year	Jan.	Mar.	May	Aug.	Sept.	Oct.	Dec.
	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	<u>cases</u>	<u>cases</u>	<u>cases</u>	<u>cases</u>	<u>cases</u>	<u>cases</u>	<u>cases</u>
Average							
1925-34	2,608	1,235	6,245	12,163	11,508	9,992	4,844
1935	2,951	1,338	5,015	10,635	10,109	8,579	3,650
1937	2,132	1,305	6,325	13,486	12,967	11,290*	

1/ Cases of 30 dozen eggs.

\* Subject to revision.

To the extent that conditions in the winter of 1937-38 are normally rigorous, the smaller production of eggs is expected to keep prices then above those of 1936-37. Abnormal weather, either mild or severe, will probably cause sharp temporary fluctuations. A large storage carry-over on January 1 will probably depress egg prices to the 1937 level, while an average carry-over would tend to keep prices well above 1937.

Farm price of eggs per dozen

Year	Jan.	Mar.	May	July	Sept.	Nov.
	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>
Average						
1925-34	31.0	19.3	18.7	20.0	25.7	35.4
1935	25.0	18.6	21.4	21.7	26.4	30.1
1936	22.8	17.5	18.1	20.0	24.5	32.5
1937	23.1	19.9	17.9	19.4	22.9	

Although the slight decline anticipated in consumers' income in the spring of 1938 will offset to some extent the effect of lower production, egg prices then are expected to be above those of the spring of 1937. With smaller storage stocks in prospect by August 1, 1938, than a year earlier and with some advance in consumers' income possible, egg prices in the fall of 1938 are expected to increase even more over 1937 prices and probably to be higher than in 1936.

Factors in Long-time Outlook

Shifting areas of production

That the center of egg production has shifted eastward from 1930 to 1935 is indicated by census data and by declining shipments of eggs from western and mid-western areas to eastern markets, especially New York City. At the same time shipments from the North Atlantic States have increased. This shift, somewhat in evidence before 1929, was largely caused by the depression and has been partly maintained by drought.

Early in the depression, with feed prices falling more rapidly than egg and poultry prices, production was stimulated especially in those areas growing



feed grains in excess of local needs. As transportation costs failed to drop as much as market egg prices, farm egg prices dropped disproportionately more in areas more distant from market than in nearby areas. A low price level accentuated the effect of this decline. Production in the Mississippi Valley and in the West was discouraged as compared with that in nearby areas having motor transportation and a higher price level.

Since the depression low in 1933, production in the West and Midwest has twice been checked by drought with attendant high feed costs that were less severe in the East because of feed imports. The Western States in the 1935-36 season, with no drought effect, increased their eastern shipments materially. Lower feed costs in the future are likely to encourage production in the Western and Mid-western areas. Higher feed costs are likely to discourage it.

That poultry equipment may be idle in one region while it is being increased in another is only one of the consequences of this shift. The seasonal variation of egg and poultry production has also been modified since in the North Atlantic area there is less seasonal change in climate than in the Midwest. As a result, a larger proportion of total egg production is laid in the winter months and the seasonal variation in egg prices has also been modified, the rise from spring to fall being smaller both actually and proportionally than before 1930.

Storage losses often result from such less-than-average seasonal price advances. It is likely that a decrease in the total demand for eggs for storage will result from a continuation of these diminishing seasonal price rises.

#### Cold storage of frozen eggs

The proportion of the total egg holdings that is stored in frozen form has been steadily increasing. Though less than 3 percent of the total stock was frozen in 1916, more than one-third of a much larger stock was frozen in 1936.

Storage stocks, shell and frozen eggs - August 1 holdings

Years	1916-20	1921-25	1926-30	1931-35	1936	1937
	1,000	1,000	1,000	1,000	1,000	1,000
	<u>cases</u>	<u>cases</u>	<u>cases</u>	<u>cases</u>	<u>cases</u>	<u>cases</u>
5-year average						
Shell eggs .....	6,849	9,513	10,249	8,470	7,335	8,718
Frozen eggs .....	432	972	2,415	3,196	3,300	4,768
Total .....	7,281	10,485	12,664	11,666	10,635	13,486
Frozen percent of :						
total .....	5.9	9.3	19.1	27.4	31.0	35.4

Although shell eggs in storage must ordinarily be disposed of by the following spring, frozen eggs may be kept a longer time. If this trend continues, as seems likely, it must sooner or later bring about a reduction in the seasonal movement of egg prices which is likely to decrease the demand for eggs from storage in the shell.

#### Quality-egg marketing programs

In some areas marketing programs that recognize egg quality have made considerable progress under Federal-State quality certification. In other areas quality programs are operating under State supervision alone. The most satisfactory of these programs, from the producers' point of view, are those in which

## Poultry and Eggs - 9

producers of better-than-average quality have the cooperation of retailers in establishing a consumer demand for the product. Further development of such programs may be expected to benefit producers who are in a position to take advantage of them since they offer more direct outlets and for some qualities of eggs, higher prices.

The marketing of poultry and eggs at auction by producers located close to large markets has grown rapidly in the northeast and as far west as Ohio. The buyers at these auctions are mostly hucksters, retailers, wholesale dealers, chain stores, and some producers. The services of the auction are classification, grading, inspection, and selling. The auctions have provided a more satisfactory method of sale for some producers.

### New developments in poultry marketing

The marketing of full-drawn poultry is increasing and with it the cutting up of carcasses and the marketing of poultry parts. This innovation has been advocated as a service to consumers, full-drawn poultry possibly being more palatable, and poultry parts more suited to consumers who do not require a whole chicken. Breaking up the retail package into smaller parts may make the average consumer's purchase smaller but in the long run it is probable that this consumer service will increase demand by reaching more consumers, both in the small-family and lower-income groups.

### Feed-grain price stabilization

The important effect which the feed-egg ratio has on production indicates that any activity that would limit the year-to-year fluctuation in feed prices would also reduce the year-to-year change in poultry and egg production. Several proposals for agricultural legislation that might affect feed supplies and prices have been proposed in Congress. One of these is the proposal for an "Ever-normal granary, warehouse or reserve supply". This proposal includes, among others, a plan to maintain a surplus of some feed grains, in addition to the normal supply, which will be sufficient to meet domestic consumption and export demand in years of drought flood, or other adverse conditions. Any practicable plan which would achieve greater stability in feed-grain prices, which are an important cost factor, should benefit poultrymen, especially those who operate continuously year after year.

### Foreign trade

The disturbed situation in China will doubtless reduce egg exports from that country both to the United States and to Europe. Hence an increase in domestic egg-breaking and egg-drying is probable. This increase, however, is not expected to be great enough to affect materially the farm price of eggs.

#### Eggs: Imports for consumption, and domestic exports

Item	:1927-31 : :average :	1932	1933	1934	1935	1936	1937 :Jan-Aug.
	:Mil.do.	:Mil.do.	:Mil.do.	:Mil.do.	:Mil.do.	:Mil.do.	:Mil.do.
Imports...	40	10	9	8	22	27	22
Exports...	18	2	2	2	2	2	1

Shell egg equivalent.

The table shows imports and exports of eggs during a period when domestic production of eggs averaged at least 2,500 million dozens.

### Chick sexing

The practice of sexing day-old chicks has developed in the last few years, especially in the Pacific Coast States where the leghorn breed predominates and the demand for pullet chicks of this breed greatly exceeds the demand for cockerels. Some of the cockerel chicks are brooded and sold as broilers but large numbers of them are destroyed. In the midwestern or eastern States a much smaller proportion of the chick output is sexed. Should the practice of sexing day-old chicks become more general, especially in the midwestern or eastern States, it might have an important effect on the amount of poultry marketed. In years when the outlook for poultry prices was not such as to justify the cost of feeding the cockerels, considerable numbers of them might be destroyed.





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## THE OUTLOOK FOR MEAT ANIMALS AND MEATS FOR 1938

### Summary

With a much larger production of feed crops in 1937 than in 1936, an expansion in hog production and in cattle feeding in 1938 is expected by the Bureau of Agricultural Economics. Total supplies of meats, excluding poultry, in 1938 are expected to be larger than in the current year, but will continue to be less than average. The increase in total supplies of meats in 1938 probably will occur mostly in the last half of the year, and will be largely in pork and in the better grades of beef.

Consumer demand for meats in 1938 probably will be less favorable than in 1937, and the weaker demand and larger supplies will result in a lower level of meat and livestock prices in 1938 than in 1937.

Because of the droughts of 1934 and 1936, the volume of pork produced in the last 3 years has been much below average. The low level of pork production since 1934 has caused the total production of meats in this period to be less than average. Production of beef and veal has been somewhat larger than average since 1933. If feed-crop production continues near the 1937 level during the next few years, the trend in pork production will be upward, but such production probably will not reach a level equal to the 1925-29 average before 1941.

Although the trend in all livestock numbers is expected to be upward in the next few years, the total will be smaller than average until about 1940 or 1941. If feed crop production in the next 3 or 4 years is about equal to average, supplies of feed will be large in relation to the number of livestock and livestock prices will be high in relation to feed prices. Such a situation would be the reverse of that which has existed in most of the last 4 years.

### Supplies

Total supplies of meats in 1938 (calendar year) probably will be larger than in 1937, but will be smaller than average. Although total supplies of beef and veal may be slightly smaller than in 1937, supplies of pork will be considerably larger, especially in the last half of the year. The lamb supply in 1938 probably will not be much different from that of the current year.

The supply of feed grains for the 1937-38 feeding season is much larger than that of a year earlier and not greatly below average except in portions of the Western Corn Belt and the Great Plains. The supply of hay and roughage is about equal to average. The total number of grain-consuming animals on farms on January 1, 1938 probably will not be greatly different from that of a year earlier. Cattle numbers are expected to be slightly smaller, but it is probable that hog numbers will be larger. The number of sheep and lambs on farms in 1938 probably will not show much change. A further reduction is expected in the number of horses and mules. With greatly increased feed supplies and little change in the total number of grain-consuming animal units, livestock feeding in 1938 will be on a much normal basis than it was in 1935 or 1937. Hogs will be fed to heavier weights, and there will be a material increase in cattle feeding.

The outlook for meat animals and meats - 2.

### Larger hog slaughter in 1938 than in 1937

Because of the short supplies of feed grains available from 1936 production the combined spring and fall pig crop of 1937 probably will be about 6 percent smaller than that of 1936. Although hog slaughter in the 1937-38 marketing year (October - September) probably will be smaller than in 1936-37, slaughter in the calendar year 1938 is expected to be larger than that in the calendar year 1937. This difference between the two comparisons will result from seasonal shifts in the time of marketing of the pig crops of 1936, 1937, and 1938 on account of changes in feed supplies and relative prices. The average weight of hogs slaughtered in 1938 will be heavier than in 1937 and this, combined with the larger number to be slaughtered, will result in considerably larger supplies of pork next year than in the current year.

### Slaughter of cattle and calves in 1938 expected to be smaller than in 1937

Since 1933 the slaughter of cattle and calves has been considerably larger than the average for the preceding 10 years. Drought conditions in 1934 and 1936 contributed materially to the large cattle and calf slaughter. The proportion and number of cows and heifers in the total cattle slaughter during the last 4 years has been above average. Cattle slaughter in 1937 will be somewhat smaller than in 1936, with most of the reduction in the slaughter of steers. Calf slaughter in 1937 will be the largest on record. Steer slaughter in 1938 may not be greatly different from that of 1937, but the number of grain-fed steers marketed, especially well-finished steers, will be considerably larger. In view of the relatively high prices of cattle prevailing this year and the much larger supplies of feed available in most areas, it is expected that there will be a marked tendency for producers to retain breeding stock next year. Hence, it is probable that the slaughter of cows, heifers, and calves in 1938 will be smaller than in 1937, and this will cause total cattle slaughter next year to be smaller than in 1937. Average weights of cattle slaughtered in 1938 will be heavier than in 1937, but the increase in weights probably will only partly offset the probable reduction in the number slaughtered. Consequently, it is expected that the total beef supply in 1938 will be slightly smaller than in the present year, but it will include a much larger proportion of better grade beef than did the supply of the current year.

### Upward trend in livestock numbers probable for next few years

If feed-crop production in 1938 and 1939 continues at about the 1937 level, a rather marked increase in hog production will occur during the next 3 years. Even with favorable crop years, however, it is expected that not before 1941 will hog slaughter reach the level prevailing in the 5 years prior to the 1934 drought.

If there are favorable feed and pasture conditions during the next few years it seems probable that January 1, 1938 will mark the low point of the present cattle-number cycle. Cattle numbers have been reduced materially since the peak of early 1934, and the reduction that occurred during the last 3 or 4 years probably would have required 6 to 8 years, if the droughts of 1934 and 1936 had not intervened. With some holding-back of breeding stock to increase cattle numbers starting next year, the slaughter of cattle and calves during the next few years will be smaller than in any of the 4 years, 1934-37. It is not expected, however, that slaughter will be reduced to a level as low as the average for the years 1928-32, when numbers also were increasing. In the coming years before about 1941, the supply of beef will continue to represent a larger-than-average proportion of the total meat supply, as has been the case since 1933.

# The outlook for meat animals and meats - 3

During the next few years, with average feed crops, it is expected that the trend in livestock numbers will be upward, but because of the shortage of hogs they are not likely to reach the 1925-29 average before about 1940 or 1941. It appears, then, that in the next 3 or 4 years feed supplies will be large in relation to livestock numbers, and that prices of livestock will be high in relation to feed prices. This is the reverse of the situation that has prevailed during most of the last 4 years when feed supplies were reduced by drought.

Under favorable weather and feed conditions the upward trend in numbers of hogs and cattle in the next few years may carry the total number of livestock on farms by 1942 or 1943 to a level equal to or in excess of the relatively large numbers in 1933 and early 1934. Such a level of numbers probably would result in a volume of hog slaughter about equal to average for the years 1925-29, and a slaughter supply of cattle and calves much greater than the 1925-29 average and perhaps as large as the slaughter of 1936. If during the period 1941-43 hog slaughter reaches the 1925-29 average and if the total slaughter of cattle, calves, and sheep and lambs is equal to the slaughter of these species in 1936, the total volume of meats produced would be larger than the 1925-29 average.

Total and per capita production and consumption of federally inspected meats, including lard, and United States population, average 1925-29, annual 1930-37

Year	Production			Total	All meat		
				consumption:	incl. lard		
	Pork,	Beef	Total	of all	Per	Per	Population
	incl.	and	meats,	meats incl.	capita:	capita:	July 1
	lard	veal	incl.	lard	produc:	consum:	<u>1/</u>
			lard		tion	ntion:	
	Million	Million	Million	Million	Pounds	Pounds	Thousands
	pounds	pounds	pounds	pounds			
Average 1925-29	7,867	5,194	13,568	12,530	114,79	105.74	118,197
1930.....	7,718	4,704	13,072	12,344	106.20	100.21	123,091
1931.....	7,831	4,751	13,271	12,520	106.92	100.92	124,113
1932.....	7,831	4,394	12,906	12,348	103.27	98.88	124,974
1933.....	8,226	5,046	13,945	12,981	110.88	103.34	125,770
1934.....	7,231	5,602	13,458	12,794	106.28	101.23	126,626
1935.....	4,406	5,167	10,274	10,634	80.57	83.37	127,521
1936.....	6,101	5,970	12,751	12,164	99.28	94.72	128,429
1937.....							

1/ Bureau of the Census.



As it is estimated that population in 1941-43 will be about 13 percent larger than the average for the years 1925-29, the indicated annual per capita production of meats for 1941-43, assuming beef and veal equal to 1936 and pork equal to the 1925-29 average, would be somewhat smaller than the 1925-29 average. If it is assumed that exports and imports of meats would be negligible in 1941-43, the average quantity of meat available per capita would be slightly less than the 1925-29 average per capita consumption. In the 1925-29 period a fairly large quantity of pork was exported. The lard available from the indicated hog slaughter in 1941-43, however, would be considerably in excess of domestic consumption requirements. If the per capita consumption of lard in this period should be equal to the 1925-29 average, the indicated lard supply would provide for domestic requirements and approximately 500 million pounds of lard would be available for export each year. Such a volume of lard exports would be considerably greater than in 1936 and 1937, but it would be smaller than the exports in most years before 1934.

The volume of meat production and of livestock slaughter indicated for the 1941-43 period would make possible a fairly high level of livestock prices, if domestic demand conditions at that time should be as favorable as in the years 1925-29. If the domestic demand for meats in the 1941-43 period should be about equal to that of 1937, livestock prices would be considerably lower than in the present year, when supplies have been below average; and they would be materially lower than during the 1925-29 period, when consumer demand was greater than it has been in 1937. Under the conditions indicated, however, livestock prices in 1941-43 would be much higher than in 1932 and 1933, when the per capita production of meats was about the same as indicated for 1941-43 but when demand conditions were very unfavorable.

#### Demand

Consumer demand for meats in the first 8 months in 1937 was slightly stronger than in the corresponding period of 1936. The per capita consumption of federally inspected meats, including lard, from January through August this year, totaling 59.8 pounds, was about 2 percent smaller than that of a year earlier but the index number of retail prices of meats was about 6 percent higher. The improvement in the demand for meats thus far in 1937 reflects the generally larger incomes of consumers this year than last. The demand for meats has improved steadily since 1933 along with the increase in national income and increases in employment and pay rolls. Thus far in 1937 the demand for meats has been better than in any similar period since 1930 and has been much better than it was at the depression low level of 1932 and 1933.

Index numbers of retail prices and consumption of meats, and  
national income, 1928-37

(1924-1929 = 100)

Year	: Retail : prices of : meats : <u>1/</u>	: Consumption of federally: : inspected meats, : <u>including lard</u> : Total	: National income : excluding : agricultural : income <u>2/</u>	
1928.....	106.0	100.5	98.6	104.1
1929.....	109.3	100.8	97.7	107.0
1930.....	102.5	98.0	93.6	100.4
1931.....	87.0	99.4	94.2	85.5
1932.....	68.1	98.0	92.3	67.6
1933.....	59.3	103.0	96.5	63.0
1934.....	67.7	101.5	94.5	71.9
1935.....	86.7	84.4	77.9	77.0
1936.....	85.5	96.5	88.4	87.0
1937.....	<u>3/</u> 90.7			<u>3/</u> 96.0

1/ Bureau of Labor Statistics.2/ Agricultural Adjustment Administration.3/ January - August.

With prospects for a slightly lower level of national income in 1938 than in 1937, it is expected that the demand for meats next year will be less favorable than during the present year. As the less favorable demand in 1938 probably will be accompanied by larger meat supplies than in 1937, the general average of retail meat prices for the year 1938 probably will be lower than in 1937. Since supplies of the better grades of beef will be much larger in 1938 than in the present year, it is expected that prices of such beef will be considerably lower than in 1937. Prices of the lower grades of beef may average no lower than in the present year, for supplies of such beef are likely to be smaller than a year earlier. Prices of pork next year probably will average lower than this year, but most of the drop in prices compared with a year earlier will occur in the last half of 1938.





## THE HOG OUTLOOK FOR 1938

Release Date  
November 5-P.M.

### Summary

The number of hogs slaughtered in the 1937-38 marketing year, which began October 1, probably will be somewhat smaller than in 1936-37 but larger than in either 1934-35 or 1935-36. The Bureau of Agricultural Economics further states in its 1938 hog outlook that average weights this year are expected to be heavier than in 1936-37 when they were below average because of feed scarcity. The increase in average weights will largely offset the reduction in numbers slaughtered, hence total supplies of hog products in the current year probably will be about as large as a year earlier. Seasonal changes in hog marketings through the year in 1937-38 will be much different from those in 1936-37, when the feed shortage resulted in heavy marketings in the first half of the year and very light marketings in the second half.

Domestic demand for hog products, including both consumer demand and storage demand, in this country in the 1937-38 marketing year probably will be less favorable than in 1936-37. Little improvement in export demand for United States hog products is expected. Hog prices in 1937-38, therefore, are expected to average lower than in 1936-37.

Seasonal price movements will be somewhat different this year from last, since the average price for the second half of the current year is not expected to show as great an increase over that of the first half as it did in 1936-37.

The number of pigs raised in 1938 will be considerably larger than in 1937, but this increase will not be reflected in larger slaughter until late 1938 and 1939. In the Western Corn Belt, where hog numbers have been sharply reduced since 1933, the expansion in production next year will be only moderate, for corn production in 1937 in the Corn Belt States west of Missouri River was curtailed by drought. If feed-grain production in 1938 and 1939 should be about average, a further increase in hog production will occur. But even with favorable crop years, the number of pigs raised will not reach a level equal to 1929-33 average before 1940.

If by 1941 hog slaughter should about equal the 1929-33 average and domestic demand for hogs should be about as favorable as in 1937, hog prices would be materially lower than in 1937 but not as low as in 1932 and 1933 when consumer income was greatly reduced and hog slaughter was about average in volume.

### Domestic Supplies

The number of hogs slaughtered under Federal inspection in the present marketing year, (October 1, 1937 to September 30, 1938) is expected to be somewhat smaller than the 34 million head slaughtered in the 1936-37 marketing year, somewhat larger than the slaughter in 1934-35 and 1935-36 (which was about 31 million head), and much below the slaughter in the 10 years 1924-25 to 1933-34, that ranged from 41 million and 49 million head.

The spring pig crop of 1937, estimated at 38,779,000 head, was about 3 million head smaller than the 1936 spring crop, about 6 million head larger than the 1935 spring crop, and about 1 million head smaller than the 1934 spring crop. Except for that in 1935 it was the smallest in many years. Compared with 1936, nearly all of the reductions were in the West North Central States, reflecting the short corn production in 1936 in that area.

#### 1937 Fall Pig Crop expected to be smaller than that of 1936

The fall pig crop of 1937 is expected to be somewhat smaller than that of 1936 and about the same as that of 1935. The number of sows to farrow in the fall season of 1937 was indicated by the June Pig Report to be about 3 percent smaller than the number farrowed in the fall of 1936. Developments since this report was issued have not been such as to point to any considerable change from what was indicated by breeding intentions reported in June. Although hog prices reached the highest level since 1926 during the summer, the hog-corn price ratio continued below average for the season. Because of drought and high temperatures in August, corn production in the area from Oklahoma to South Dakota will again be very short. It now hardly seems probable that the increase in fall farrowings indicated for this area in the June report will be realized. Although corn production will be above average in the central and eastern Corn Belt, any tendency for fall farrowings to be larger than indicated in June is not expected to more than offset probable decreases from the June indications in the drought area.

If the number of sows farrowed during the present fall farrowing season should be about as indicated in June, the fall pig crop will be about 1 million head smaller than that of 1936, assuming an average number of pigs per litter equal to that of the fall of 1936, and the total 1937 pig crop, spring and fall, will be about 4 million head smaller than in 1936. Nearly all of this reduction will be in the Corn Belt and adjacent States that furnish most of the commercial supply of hogs. Most of the reduction in the Corn Belt will be in the area west of the Mississippi River.

#### Smaller Hog Slaughter in 1937-38 than in 1936-37 expected

Hog slaughter under Federal inspection in the 1937-38 marketing year is not expected to show a reduction as large as the indicated reduction in the pig crop of 1937. This situation arises partly because of the effects of last year's drought on the distribution of the 1936 pig crop as reflected in slaughter during the 1935-36 and 1936-37 marketing years. Slaughter in 1935-36 was large in relation to the 1935 pig crop because of the liquidation of hogs and pigs from the drought area during the last 3 months (July to September) of that year. Slaughter in 1936-37 was small in relation to the 1936 pig crop. This resulted in part because of heavy marketings of hogs and pigs in the last 3 months of the 1935-36 marketing year which normally would have gone to market in the early part of the 1936-37 year. Slaughter in 1936-37 also was reduced because of the small marketings of 1937 pigs in that year and because of the carry-over of other hogs into 1937-38 that normally would have been marketed earlier. Present information indicates that inspected slaughter in 1937-38 will be from 32 to 33 million head.

The seasonal distribution of hogs slaughtered in the 1937-38 marketing year will be much different from that in 1936-37 and fairly similar to that of 1935-36 and other years, when feed supplies were large relative to hog supplies and the hog-corn price ratio was favorable for feeding hogs to heavy weights. The number of hogs marketed in the 3 months, October to December, 1937, will be much smaller than a year earlier and will represent a relatively small proportion of the total for both the first 6 months of the marketing year and the whole marketing year. The total inspected slaughter for these 3 months, however, probably will exceed the small total of 7,400,000 head during the corresponding period in 1935.

Slaughter from January to March is expected to exceed materially that from October to December, whereas in most years it is about the same. The fall pig crop of 1937 also will be marketed later than usual and much later than the fall crop of 1936. This will cause marketings from May through July 1938, to be considerably larger than a year earlier.

#### Average weights of hogs will be heavier

The average weight of hogs slaughtered in the marketing year 1937-38 will be heavier than in 1936-37, with the greatest difference in the first 4 or 5 months of the year. The average for the year probably will range from 230 to 235 pounds compared with 220 pounds in 1936-37 and 232 pounds in 1935-36. The heavier average weights in prospect will about offset the expected decrease in the number of hogs slaughtered, and the total live weight of hogs slaughtered in 1937-38 probably will be little different from that of 1936-37.

#### Storage Supplies

The storage demand for hog products was unusually strong during the late fall and early winter of 1936-37. The increase in storage stocks from November to March was much greater than average, and the proportion of the total volume of the winter hog production going into storage was relatively large. On November 1, 1936, the beginning of the storage season, stocks of pork and lard were much below average, but by March 1, 1937 they were above average and were much larger than on the corresponding date of either 1935 or 1936. The strong storage demand and the large storage accumulations last winter apparently resulted partly from the expectation that during the last half of 1936-37, supplies of hogs would be small in relation to those of the first half of the year and that prices of hogs and hog products would advance materially during the spring and summer of 1937.

#### Storage stocks reduced in the summer of 1937

The marked reduction in slaughter supplies of hogs from May through August 1937 was accompanied by a material decrease in stocks of both pork and lard. A decrease in stocks of pork usually occurs during the summer, but lard stocks normally increase until August. At the beginning of October, stocks of pork were less than half as large as on March 1, and they were the second smallest for that date on record. Lard stocks on October 1 were below average and were about 29 percent smaller than a year earlier, whereas on March 1 they were more than twice as large as those of a year earlier.



Weaker storage demand expected in 1937-38

The storage situation in 1937-38 probably will be much different from that of last year. Since it is expected that hog slaughter in the last half of the marketing year will represent a relatively large proportion of the yearly total a marked rise in hog prices in the late spring and summer of 1938 is improbable. Consequently, the storage demand for hog products in the 1937-38 winter season probably will not be so strong as in the corresponding period of 1936-37.

With relatively small slaughter supplies of hogs in prospect for the first 3 months of the 1937-38 marketing year, the accumulation of hog products in storage probably will be relatively small for the period and much smaller than last year. Although the quantity of hog products placed in storage during the second quarter of the marketing year (January - March) probably will be larger than during the first quarter, total storage accumulations for the entire winter season are expected to be relatively small. Consequently, stocks at the beginning of the second half of the marketing year, April 1, 1938, probably will be materially smaller than the large storage holdings on April 1, 1937. These small stocks on hand in the late spring and summer will partly offset the prospective increase in slaughter supplies of hogs in the coming summer over a year earlier.

## Storage holdings of pork and lard, specified periods

Date	: 5-year av. : : : : : : : :							
	: 1929-30 to : 1934-35 : 1935-36 : 1936-37							
	: 1933-34 :							
	: Pork :	Lard :	Pork :	Lard :	Pork :	Lard :	Pork :	Lard :
	: 1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	: pounds	pounds	pounds	pounds	pounds	pounds	pounds	pounds
Nov. 1	: 431,192	68,785	504,737	105,519	240,663	40,702	354,950	94,748
Jan. 1	: 565,206	71,671	687,563	118,107	326,777	52,718	666,891	145,809
Mar. 1	: 758,930	102,796	666,598	110,197	451,418	78,725	775,688	202,476
July 1	: 713,460	149,526	445,307	84,680	435,130	106,774	576,424	185,124
Oct. 1	: 530,300	109,087	277,605	45,350	361,608	101,796 <sup>1/2</sup>	283,287 <sup>1/2</sup>	72,535
	:							
	:							

<sup>1/</sup> Preliminary.

Exports and Imports of Hog Products

Exports of hog products thus far in 1937 have continued near the low level of 1936 and have been much smaller than the exports of all post-war years prior to 1935. Exports of pork and lard decreased materially from 1925 to 1933, chiefly because of increased hog production in Europe and restrictions placed on imports in several foreign countries. A further marked reduction in exports occurred in 1934 and 1935 as a result of short supplies and relatively high prices of hogs and hog products in this country. In the years 1925-29 the average annual exports of hog products were roughly equivalent to the products obtainable from about 7 million hogs of average market weight, or about 15 percent of the average number of hogs slaughtered under Federal inspection during that period. In 1936 exports were equivalent to only about 1 million hogs, or about 3 percent of the inspected hog slaughter.

Exports, imports, and production of pork and lard, averages  
1921-25 and 1926-30, annual 1931-36

Year	Exports <u>1/</u>		Imports:	Production		Exports as a		Imports of
			of			percent of		pork as a
			pork			production		percentage
	Pork	Lard	<u>2/</u>	Pork	Lard	Pork	Lard	of total
								domestic
								consumption
	Million	Million	Million	Million	Million	Percent	Percent	Percent
	pounds	pounds	pounds	pounds	pounds			
Average :								
1921-25 :	783	896	7.4	8,520	2,367	9.2	37.8	0.1
1926-30 :	381	759	21.1	8,540	2,297	4.5	33.0	0.3
1931 :	224	601	4.6	8,691	2,271	2.6	26.5	0.06
1932 :	175	576	5.9	8,863	2,342	2.0	24.6	0.07
1933 :	202	612	3.1	9,093	2,441	2.2	25.1	0.03
1934 :	211	458	1.8	8,367	2,063	2.5	22.2	0.02
1935 :	136	116	11.0	5,856	1,250	2.3	9.3	0.18
1936 :	118	137	42.1	7,454	1,661	1.6	8.2	0.60

1/ U.S.Department of Commerce. Includes shipments to noncontiguous territories. Pork converted to a dressed weight basis.

2/ U.S.Department of Commerce. Tentative, subject to revision.

Decrease in European hog production in prospect

During recent months decreases have been reported in hog numbers in most European countries, and it is expected that hog slaughter in Europe in 1938 will be less than in 1937. The reduction in numbers in the exporting countries of northern Europe has resulted partly from the necessity for conforming with requirements of the British import quotas and partly from the smaller supplies and higher prices of feeds. In the exporting countries of southeastern Europe, hog numbers have not been reduced, but the inability of those countries to absorb a large volume of industrial goods offered in exchange for lard and pork shipped to central European countries has tended to limit production to some extent.

Import restrictions in European Countries

Since late 1932 imports of pork from non-British Empire countries into Great Britain have been limited by import quotas. It is not yet certain whether the British quota system will be continued or replaced by a system of import duties. For a number of years Great Britain has been the chief outlet for exports of pork from the United States, but in the last 2 years exports from this country have not been sufficiently large to fill the import quota allocated to the United States.

Restrictions have also been placed on imports of lard in some foreign countries. Imports of lard from the United States have been practically excluded from Germany, formerly the second largest export outlet for American lard. In Great Britain, the leading export outlet for such lard, no restrictions have been placed on imports, except a small duty levied in 1932. In Cuba, import duties on lard were increased materially before 1933, but under the provisions of the Cuban trade agreement, the import duty on American lard in Cuba has been lowered twice, once in 1934 and again in 1936. Since the Cuban duty was reduced, exports of lard from this country to Cuba have increased considerably, and Cuba is now the second most important outlet for the reduced exports of United States lard.

Exports of pork and lard to continue small in 1937-38

Despite the decrease in European hog production in prospect, it is expected that exports of pork and lard from the United States during the present marketing year will continue small, for hog slaughter in this country will not be greatly different from that of last year. In the next few years, as hog production in this country increases, it is probable that exports of pork and lard also will increase, but even if domestic hog slaughter increases to the level prevailing in the years 1930-34, exports may not increase to the average volume for the 1930-34 period.

The restrictions on imports of pork into Great Britain from non-Empire countries have been accompanied by a material increase in exports from Canada to Great Britain and by some increase in production in Great Britain. At present there is no indication that Germany or other continental European countries will be disposed to liberalize import restrictions on American lard. A material increase in exports of lard to Great Britain is probable when larger domestic supplies are available but the use of vegetable and marine oils in that country has expanded considerably in the last 3 years to replace the large volume of American lard formerly imported. Consequently, with the return of hog production in the United States to more normal levels in the next 3 or 4 years, it may be that foreign markets for pork and lard will have become fairly well accustomed to the absence of American products. Some difficulty may be encountered, therefore, in expanding the United States export trade.



U. S. imports of pork increase in 1937

Imports of pork thus far in 1937 have been considerably larger than in other post-war years. But they continue to be very small in relation to domestic production. In 1937, probably for the first time on record, imports of pork will exceed exports of that product. For the period January through August 1937, the combined imports of pork and live hogs were equivalent to about 522,000 hogs of average market weight. Inspected hog slaughter in the United States during this period totaled 19,645,000 head. Since total imports of hogs and pork thus far in 1937 were equivalent to only about 3 percent of inspected slaughter in this country, it is evident that prices of hogs in the United States have not been affected appreciably by the increase in imports.

The increase in pork imports in the present year has been largely in shipments of canned hams, mostly from Poland, but to a lesser extent from other European countries. The principal reason for the increase in pork imports has been the greater advance in the price of hogs and hog products in the last 3 or 4 years in this country than in foreign countries. As a result prices in the United States are now somewhat higher than prices in some foreign countries, whereas in most years before 1935 they were somewhat lower.

Imports of pork not likely to become large

Europe, as a whole, generally produces a smaller quantity of hog products than is needed for European consumption requirements. The increase in hog production in Europe during recent years, however, has reduced materially the need of European countries for imported pork. On the other hand, fat production in Europe is still considerably short of European needs for fat. In view of these considerations, it seems probable that exports of pork from European countries to the United States will ever become large, despite the recent increase in imports of hams from Poland. Furthermore, if feed-crop production in the United States continues near the 1937 level in the next few years, hog production will increase greatly. Under such conditions a considerable decrease in imports of pork will occur.

Prices

Hog prices in the 1936-37 marketing year followed a course somewhat different from the usual seasonal pattern. Instead of declining from October through December as they usually do, prices were fairly steady in most of this period, and they advanced moderately in late December and early January. The relative strength in prices during the period from October to early January, when slaughter supplies were increasing seasonally, resulted chiefly from the strong storage demand for hog products during the late fall and early winter.

From February through April, 1937, there was little change in prices, with the Chicago weekly average fluctuating around the \$10 level during most of that period. Ordinarily prices advance in late February and March as slaughter supplies are seasonally reduced. During this period in 1937 the seasonal reduction in supplies was less than usual and in addition the quantity of hog products in storage was much above average. In the last half of May, hog prices advanced sharply, whereas there is usually some decline in that month as marketings of fall pigs increase seasonally. Last May, however, supplies were smaller than in April.

Hog prices last summer reached the highest level in 11 years

A further sharp advance in hog prices occurred in July and in the first half of August as supplies were reduced to the smallest volume in many years. In early August hog prices reached the highest level since 1926. The average price of butcher hogs at Chicago for the second week of August was about \$13, compared with about \$10 in late April before the advance began and about \$11 a year earlier. In the last half of August and in early September, prices of butcher hogs at Chicago declined about \$1.50 per 100 pounds. Part of this decline was regained during the second and third weeks of September, but further weakness developed late in that month, and in October prices declined sharply. The drop in prices from mid-August to late October carried prices of butcher hogs at Chicago to a level slightly below \$9.50.

During the 1936-37 marketing year the average price of \$10.15 paid by packers for hogs was slightly higher than that of 1935-36. Since slaughter supplies in 1936-37 were somewhat larger than in the previous year, the higher average price largely reflected the increase in consumer demand in 1936-37 over that in 1935-36. Total payments by packers for hogs slaughtered under Federal inspection in 1936-37 were about 8 percent larger than those of 1935-36.

Inspected slaughter, live weight, and cost to packers for hogs, average  
1928-29 to 1932-33, annual 1933-34 to 1936-37

		Live weight		Cost to packers	
Year beginning	Inspected:	Average	Total	Average per	Total
Oct.	slaughter:			100 pounds	2/
	1/			2/	
	Thousands	Pounds	Mil. lbs.	Dollars	Mil. dols.
Average 1928-29 :					
to 1932-33 ... :	46,363	231	10,723	6.92	742
1933-34 ..... :	43,911	225	9,872	4.07	401
1934-35 ..... :	30,680	220	6,742	7.75	523
1935-36 ..... :	31,022	232	7,191	9.79	704
1936-37 ..... :	34,142	221	7,538	10.18	767

1/ Bureau of Animal Industry.

2/ Not including processing tax payments November 1933-January 1936.

Prices in 1937-38 expected to be no higher than in 1936-37

As the total live weight of hogs for slaughter in 1937-38 probably will be little different from that of a year earlier and the domestic demand, including consumer demand and storage demand, for hog products may be less favorable, it is expected that hog prices in 1937-38 will average lower than in 1936-37. Seasonal changes in hog prices in the present marketing year, however, are likely to be considerably different from those of last year. With marketings in the first half of the year probably smaller than a year earlier, and also representing a smaller-than-average proportion of the yearly total, it is expected that hog prices in the first half of 1937-38 will be high in relation to those of the last half of the year. This is the reverse of the situation that prevailed in 1936-37.

A large part of the autumn seasonal decline in hog prices apparently had occurred by late October of this year. Although supplies from October through December this year will be considerably smaller than those of a year earlier, they will be seasonally larger than the very small slaughter for the period from July through September. As already indicated, the storage demand for hog products in the late fall and early winter probably will not be so strong as it was a year earlier.

Changes in prices of hogs from month to month after the beginning of 1938 are rather uncertain. Although the seasonal reduction in hog slaughter after January may not be large, prices also will be affected by changes in storage demand and in consumer demand for hog products. Unless consumer demand in the winter and spring weakens more than now appears probable, some seasonal advance in hog prices in the late winter and early spring may be expected. With prospects for considerably larger marketings of hogs next summer than a year earlier, hog prices in that period probably will average lower than the relatively high level of prices last summer.

Production Outlook

Hog production (number of pigs raised) in 1938 is expected to be materially larger than in 1937. This increase will not be reflected in increased slaughter until the end of 1938 and in 1939. The spring pig crop of 1938 probably will be larger than that in any of the preceding 4 years, but will still be considerably below the average of the years from 1920 to 1933. The fall pig crop of 1938 will be larger than that of the fall crop of 1937 unless another severe drought should again cut down corn production in the Corn Belt.

Upward trend in hog production in prospect

If feed-grain production in 1938 and 1939 should be about average a further increase in hog production will occur, but it is expected that, even with favorable crop years, the number of pigs raised will not reach the 1929-33 average level before 1940. Slaughter supplies of hogs under such conditions will not reach average numbers before 1941.



The 1938 pig crop will be smaller than it would have been if the corn crop this year in the western part of the Corn Belt had been of average size. But with corn supplies in Kansas, Nebraska, and South Dakota, very short any considerable increase in the spring pig crop in this area is improbable. These are the States where hog production has been most drastically reduced in the last few years and where the largest increases in production could be expected if feed supplies had made this possible. This situation will tend to retard the recovery in hog production for at least one year, and possibly 2 years.

### Regional trends in production

The effects of the drought of 1934 and 1936 on changes in hog production in different sections of the country have been to disrupt the usual proportional distribution of hogs among these areas. The accompanying table shows the combined spring and fall pig crops by regions for the years 1930 to 1937 and the percentage change in numbers from 1930 to 1937. This shows that compared with 1930, practically all the reduction has been in the West North Central and Western States, that numbers in the East North Central are little changed, and that marked increases have taken place in other sections of the country.

Combined spring and fall pig crops by regions, 1930-37

Region	: 1930	: 1931	: 1932	: 1933	: 1934	: 1935	: 1936	: 1937	: 1937 as a percentage of 1930
	: Thou- sands	: Thou- sands	: Thou- sands	: Thou- sands	: Thou- sands	: Thou- sands	: Thou- sands	: Thou- sands	: Percent
E. N. Central	17,881	19,886	21,836	23,022	15,445	15,442	18,163	17,667	98.8
W. N. Central	40,025	44,651	39,487	40,670	25,025	22,515	27,119	23,807	59.5
All N. Central	57,906	64,536	61,323	63,692	40,470	37,957	45,282	41,474	71.6
North Atlantic	1,360	1,367	1,402	1,366	1,158	1,273	1,511	1,613	118.6
South Atlantic	4,577	4,837	5,368	5,256	4,570	4,943	5,660	6,116	133.6
E. S. Central	3,536	3,885	4,887	5,066	3,970	4,196	4,807	4,768	134.8
W. S. Central	3,794	4,972	6,333	5,927	4,540	4,697	5,788	5,261	138.7
Western	2,962	3,578	3,212	2,893	2,058	2,008	2,603	2,520	85.1
United States	74,135	83,176	82,525	84,200	56,766	55,074	65,651	61,752	83.3

Except for 1935, the number of pigs produced in the West North Central States in 1937 was the smallest since the World War, at least. In all sections of this area, hog production has been sharply reduced, and in those sections where the effects of the droughts were especially severe the number of pigs produced in 1937 represents only a small fraction of the number raised in the years prior to 1934. In view of the relative importance of hog production to farming in the western Corn Belt as a whole, it is expected that the number of pigs raised in this area will increase greatly during the next few years if feed supplies are near average.

In the Western States, where income from hog production is of minor importance in total farm income, the decrease in production has been relatively much less than in the western Corn Belt. If hog prices continue fairly high through 1938 it is not improbable that hog production in this area will reach normal proportions sooner than in the western Corn Belt.

In other areas hog production is now relatively large, and even though hog prices continue high and the hog-corn price ratio is favorable for hog production during the next 2 years, further large increases in hog numbers are not to be expected, except possibly in the East North Central States. In these latter States the estimated pig crop for 1937 is about equal to that of 1930 and is only 20 percent smaller than the average for 1932-33, when it was the largest in 10 years. It is hardly to be expected that any increase in the next 2 years will bring the level of production in East North Central region above the 1932-33 average.

In the Southern States the estimated pig crop for 1937 is much above average for this section. The high prices for hogs, the expanded acreage in corn and peanuts and the improved market outlets in many of these States will tend to encourage further expansion in hogs. But this is likely to be of rather moderate proportions for the area as a whole, although rather sharp increases may occur in a few States where drought conditions in 1934 and 1936 greatly reduced production.

It is fairly evident that the region where expansion in hog production will have to take place to bring total United States production back to a fairly normal level is the West North Central States. Although conditions favor a sharp increase next year in Minnesota, Iowa, and Missouri, any increase in Nebraska, Kansas, and South Dakota is likely to be rather moderate.

#### Long time prospects for hog prices

The return of inspected slaughter to a normal level - 45 or 46 million hogs - by about 1941, assuming fairly normal corn production, probably would result in a level of prices considerably different from that in the present year or in the years 1932 and 1933. If it is assumed that domestic consumer demand in 1941 will be about equal to that of 1937, it is probable that hog prices in 1941 will be lower than in the current year. Prices, however, probably would not be so low as in the years 1932 and 1933 when supplies were about equal to average and domestic consumer demand was much less favorable than in 1937.

If the volume of hog slaughter by about 1941 should equal the average for the years 1925 to 1929, the per-capita production of pork would be considerably smaller than the 1925-29 average because of population increase. Under such supply conditions if domestic per-capita consumption in 1941 were equal to the 1925-29 average, there would be practically no pork available for exports. On the other hand, under those same conditions the supply of lard available would be considerably greater than that needed to furnish domestic per-capita consumption equal to the 1925-29 average. With the possibility of recovering a considerable part of our former volume of lard exports more favorable than for recovering part of the former export trade in pork, the depressing effect of an exportable surplus of lard upon hog prices in this country might not be very great.





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## THE OUTLOOK FOR BEEF CATTLE FOR 1938

### Summary

Total slaughter of both cattle and calves in 1938 is expected to be smaller than in 1937, the Bureau of Agricultural Economics reports, with most of the decrease occurring in the first half of the year. Slaughter of steers probably will not be greatly different from that of 1937 and may be slightly larger. In those areas in which cattle numbers have been reduced in recent years because of drought it is expected that some restocking will be done and this will result in fewer cows, heifers, and calves going to slaughter. Because of the larger feed supplies in prospect compared with those of a year earlier and the relatively wide feeding margins obtained in 1937, the number of well-finished cattle for market in 1938 will be much larger than in the current year. The greatest increase in marketings of such cattle over 1937 probably will occur during the period from May to October.

Average weights of cattle slaughtered in 1938 will be considerably heavier than those of a year earlier and this increase in weight will offset in part the decrease in numbers slaughtered. Total beef supplies for consumption next year, therefore, probably will be nearly as large as in 1937, and will include a larger proportion of beef of the better grades.

In view of the prospects for relatively large marketings of grain-fed cattle during most of 1938, and some weakening in consumer demand for meats, the prices of the better grades of cattle probably will decline more than seasonally during the first half of the year. Prices of cows and of the lower grades of steers during the first half of 1938 probably will advance seasonally and average higher than in the first half of 1937, but in the second half they probably will average lower than a year earlier. The present unusually wide spread in cattle prices is expected to narrow considerably during the next 9 months.

Cattle numbers at the beginning of 1938 are expected to be slightly smaller than those of a year earlier and are likely to represent the low point in the present cattle-number cycle, unless there is a recurrence of drought in 1938 or 1939. The increase in numbers in the next cattle cycle probably will be smaller than that of the two preceding cycles. Most of the expansion in numbers probably will be in those areas in which numbers were sharply reduced in recent years because of drought and feed shortage.

Any general tendency to increase cattle numbers during the next few years is likely to result in an increase in slaughter several years hence, when hog slaughter and total meat supplies will be much larger than at present. Thus any advantage that might be gained by increasing cattle numbers in the near future probably would be more than offset by the price declines that would result later when marketings increase, unless there is a compensating increase in consumer demand.

Cattle Supplies

Slaughter of cattle and calves during 1936 and the first half of 1937 was relatively large as compared with most other years. Marketings during the last half of 1936 were large partly as a result of liquidation caused by the 1936 drought and partly because of the delayed marketing of many grain-fed cattle that originally had been intended for earlier sales. The 1936 drought also affected cattle supplies in 1937. Because of the feed shortage, less than the usual number of cattle were placed on feed in the fall and winter of 1936-37, and those fed were marketed earlier than usual. Marketings of cows were greatly increased because of the relatively high prices obtainable. During the first half of 1937 slaughter of cattle and calves held near the high levels of 1936, but after that period the slaughter of cattle was much smaller than in the previous year. Calf slaughter, however, continued near record levels.

Although inspected slaughter of cattle in the first 9 months of 1937 was 6 percent smaller than in the corresponding period of the previous year, that of calves was 7 percent larger. The combined total of both, however, was the second largest slaughter of cattle and calves for commercial account in any corresponding period of record, being exceeded only by that of the previous year. The outstanding feature in the cattle-supply situation of 1937 was the unusually small number of well-finished grain-fed cattle for slaughter, which was in direct contrast with the very large number of such cattle for sale in 1936. Average weights of cattle slaughtered in 1937 were much lighter than in 1936, hence the decrease in total weight was relatively greater than the decrease in numbers slaughtered.

Records of State of origin of market supplies of cattle and calves thus far in 1937 show a very heavy movement of cattle from Texas and relatively large shipments from other southwestern States and from most of the States west of the Rocky Mountains. Shipments from the East North Central and the North Atlantic States were fairly large. Marketings of calves from Texas and from the dairy sections of most of the Middle Western States have been large. Marketings of cattle and calves in the South were much larger than average and reflected the increased production that has taken place in that area in recent years.

Slaughter of both cattle and calves thus far in 1937 has been somewhat larger than was expected at the end of 1936, and cattle slaughter has included a much larger-than-average proportion of cows and heifers. The high prices of all feeds and the short supplies of feed grains in many areas accounted for the heavy marketings from many States. The heavy movement from Texas, although caused partly by feed shortage in limited sections, seems to have occurred largely in response to the relatively high prices prevailing during the spring and summer for all kinds of slaughter cattle.

The condition of pastures and ranges this year has been much more favorable than last, in most sections, and a much larger production of feed crops (grains and hay) is assured. But feed conditions are still unfavorable in the greater part of the Great Plains extending from Canada to the Mexican Border. The areas most adversely affected include a large territory in Montana, western and southern North Dakota, eastern Colorado, a considerable part of South Dakota, most of Nebraska, Kansas, and Oklahoma, and large sections in both northwestern and southern Texas. Most of this territory suffered severely in the droughts of 1934 and 1936, and some parts were also adversely affected by drought in 1933. The greatest decrease in cattle numbers since early 1934 has occurred in the area from Texas to the Canadian border. Consequently this area is not in a position to supply as many cattle for market as it has in other recent years. If feed supplies in this area are more plentiful, considerable restocking would take place this year, but with feed and pastures in this area still below average not much restocking can be done for at least another year.



Total slaughter of cattle and calves in 1938 is likely to be smaller than that in 1937, with most of the decrease occurring in the first half of the year. A tendency to hold back breeding stock and to rebuild herds is likely to develop in most areas where numbers have been reduced within recent years because of drought, and this will result in fewer cows, heifers, and calves going to slaughter. Slaughter of steers probably will not be greatly different from that of 1937 and may be slightly larger. In view of the larger feed supplies in prospect as compared with a year earlier, the number of well-finished cattle for market in 1938 will be considerably larger than in 1937. The greatest increase in marketings of such cattle over this year probably will occur during the period from May to October.

#### Cattle Feeding Situation

The proportion of grain-fed cattle in the slaughter supply probably will continue small during the remainder of 1937 and perhaps in early 1938. The number of cattle on feed for market in the Corn Belt States on August 1 was estimated to be about 29 percent smaller than the number on feed August 1, 1936, and apparently was the smallest number on feed on that date in many years. Decreases were reported in both the eastern and the western Corn Belts, but the greatest reduction was in the latter area.

A considerable increase in cattle feeding is expected in late 1937 and in 1938. In addition to the effect of larger feed supplies and lower feed prices, interest in cattle feeding also will be stimulated by a number of other factors, including the current high level of prices of finished cattle, the relatively large profits obtained from cattle-feeding operations in the past 6 months, and the relatively small number of hogs available for utilizing the increased feed supplies.

Shipments of stocker and feeder cattle from July through September this year were only slightly larger than those of a year earlier, and were still considerably less than average. Such shipments, however, probably will not be a reliable indication this year of the number of cattle to be fed for slaughter. Many of the stocker and feeder cattle purchased or on hand last fall were carried through the winter on maintenance rations and placed on pastures last summer to be fattened when feed supplies became more plentiful. These cattle will comprise a considerable part of the cattle that will be finished for slaughter in the coming year. It is also probable that a much larger proportion of the feeder cattle bought this year will be fattened for slaughter in the current feeding year than was the case in the past year.

In general, cattle feeding operations in 1938 will be on a more nearly normal basis than in 1937, when feed supplies were small. Cattle will be fed more grain and for longer periods. Marketings early in the year will include a large proportion of short-fed and worked-up cattle, while those later in the year will include a large number of well-finished steers.

Although prices of feeder cattle this fall are considerably higher than a year earlier, prices of corn and other feeds during the current feeding season will be much lower. In view of the cheaper feed costs, the combined cost of feeder cattle and feed in 1937-38 will be somewhat less than in 1936-37. It is probable, however, that prices of grain-fed <sup>enough</sup> cattle in 1938, especially in the last three-fourths of the year, will average lower than a year earlier to cause cattle-feeding margins to be less than the relatively wide margins obtained on cattle marketed in the second half of 1937. Prices of well-finished cattle in 1938, however, are likely to be sufficiently high to result in fairly wide margins over the cost of production for those producers who feed out cattle raised on their own farms.



Imported Supplies

Imports of cattle and beef into the United States in the first 8 months of 1937, totaling the equivalent of 253 million pounds dressed carcass weight, were 2 percent larger than those in the corresponding period of 1936. Imports of live cattle and calves were larger than in the previous year, but those of canned beef were smaller. Total imports were equal to about 5 percent of the estimated total dressed weight of cattle and calves slaughtered in this country during the period. This percentage was slightly larger than that of a year earlier.

The number of cattle imported during the first 8 months of 1937 was 23 percent larger than the number imported during the corresponding period of 1936, and was somewhat larger than the number imported in the entire 12 months of 1936. But average live weights of cattle imported in 1937 have been considerably lighter than those of a year earlier. Imports of light calves from Canada and of cattle weighing less than 700 pounds from Mexico account for much of the increase in numbers imported in 1937. Nevertheless, the annual quota of cattle weighing 700 pounds and over allowed entry at the reduced rate of duty was filled by mid-August this year, whereas in 1936 it was not filled until November. The duty on such cattle after the quota is filled is increased from 2 to 3 cents a pound.

Imports of live cattle and calves from Canada, Mexico, and other countries, 1934-36, and January to August 1936 and 1937

Year and Month	Canada	Mexico	Other countries	Total
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
1934 .....	7,433	57,090	1,781	66,304
1935 .....	125,786	251,370	968	378,124
1936 .....	244,406	164,730	1,163	410,299
Jan. - Aug.				
1936 .....	202,377	135,614	706	338,697
1937 .....	244,342	171,692	1,118	417,152

United States Department of Commerce.

The increase in the number of cattle and calves imported from January through August 1937 over those imported during the corresponding period of 1936 resulted largely from the forced selling of cattle in Canada and Mexico on account of short feed supplies and poor grazing conditions. In Canada, shortage of feed not only resulted from the drought of last year but there was a continuance of drought conditions in the western cattle area of that country in 1937. In Mexico, grazing conditions have been extremely poor this year in some important cattle areas. Because of the relative changes in the supply and demand factors in the two countries, the spread between cattle prices in the United States and those in Canada was considerably wider in the first 9 months of this year than in the corresponding period of last year. This spread has increased greatly since 1934, although it narrowed somewhat in 1936 when the rate of duty on certain classes of cattle was lowered on a specified quota of imports.

# The Outlook for Beef Cattle - 5

Prices of steers at Winnipeg, Toronto, and Chicago and spread between prices at Chicago and Winnipeg and Chicago and Toronto, 1934-36 and January to September 1936 and 1937

Year and month	: Winnipeg, good : steers, over : 1050 pounds : 1/	: Toronto, good : steers, over : 1050 pounds : 1/	: Chicago, av. : good and : medium : steers : 2/	: Spread between : Chicago : and : Winnipeg : prices :	: Chicago : and : Toronto : prices :
	Dollars	Dollars	Dollars	Dollars	Dollars
1934.....	4.22	5.56	6.24	2.02	.68
1935.....	5.33	6.40	9.80	4.47	3.40
1936.....	4.67	5.51	8.45	3.78	2.94
Jan. - Sept.					
1936 .....	4.58	5.58	8.24	3.66	2.66
1937.....	3/ 6.68	3/ 7.76	10.99	4.31	3.23

1/ Monthly Bulletin of Agricultural Statistics, Ottawa, Good and Choice steers prior to 1936. 2/ Beef steers sold out of first hands for slaughter. 3/ Preliminary

Because of the relatively small number of hogs on farms in this country and the smaller-than-average total supplies of meats available for consumption, cattle prices in the United States are likely to continue high in relation to those of most other countries during the next 2 or 3 years. Imports of cattle into this country during this period, therefore, may continue to be relatively large. In the western cattle area of Canada, however, drought conditions in 1936 and 1937 caused a heavy liquidation of cattle. As a result, imports of feeder cattle of all weights into this country from Canada were much larger than usual in the first 8 months of 1937. Because of the present shortage of feed grains in western Canada, supplies of Canadian-fed cattle probably will be relatively small in 1938. Hence, imports of slaughter cattle from Canada in 1938 are also likely to be relatively small, and if weather conditions in western Canada are more favorable in 1938 than in 1937 total imports of all cattle from Canada may be somewhat smaller than in 1937. Imports of canned beef in 1938 may continue large, although the volume of such imports will depend to some extent on the European market for chilled beef from South America. If exports of chilled beef from South America to Europe are increased in the next few years, the quantity of canned beef available for shipment to the United States may be somewhat further reduced.

## Cattle Prices

Prices of the better grades of slaughter cattle recovered somewhat in the last half of 1936 after experiencing a sharp decline in the first half of that year. This advance, however, was partly seasonal in character, since prices of such cattle usually rise in the late summer and fall. The rise in prices which started in late 1936 continued through the greater part of the first 9 months of 1937. The advance in the prices of cattle of the better grades resulted chiefly because of the very small market supplies of such cattle for slaughter. Prices of such cattle ordinarily decline in the first half of the year. In late September the top price paid for slaughter steers at Chicago reached \$19.90 per 100 pounds, which was the highest September price at that market on record and was the highest price for any month since December 1919. Prices of best steers held above \$19.00 during most of October. For the month of September prices of Choice and Prime grade steers at Chicago averaged \$17.38 compared with \$13.12 in January and \$9.60 in September last year.



Prices of the lower grades of slaughter steers advanced slightly in the last half of 1936, whereas they usually decline in the second half of the year. From February through July 1937, prices of the lower grades advanced further. The trend in prices of cattle of these grades, however, is usually upward in the first half of the year. From August through October prices of the lower grades declined seasonally. Prices of Common grade slaughter steers at Chicago averaged \$8.01 in September compared with \$7.28 in January and \$6.35 in September a year earlier.

The rise in the prices of the lower grades of slaughter steers in the past year was much less pronounced than the advance in prices of the better grades, and this caused the spread in cattle prices to be much greater than average. The spread between the prices of Common grade steers and prices of Choice and Prime grade steers at Chicago in September this year was more than \$9.25, whereas in September last year it was only \$3.25. The spread in September this year was the greatest for all months in the 16 years of record.

Prices of stocker and feeder cattle advanced during the last half of 1936 and the first quarter of 1937. Little change occurred in the second quarter of this year, but there was a further advance in July and early August. Since mid-August prices of stocker and feeder cattle have declined somewhat, but in October prices of such cattle were nearly \$2 per 100 pounds higher than a year earlier. The rise from July 1936 to August this year, however, was much less pronounced than the advance in prices of the better grades of slaughter cattle.

Although the cost of feed for finishing cattle in the past year has been very high, the margin between the cost of feeder cattle bought last fall and the prices of finished cattle in the spring and summer of this year was more than wide enough to offset the high cost of feed. Most cattle-feeding operations in 1937, therefore, have been generally profitable.

The prospects for large marketings of grain-fed cattle during most of 1938, and some weakening in consumer demand for meats, indicate that prices of the better grades of slaughter steers probably will decline more than seasonally in the first half of next year. The extent of this decline and the probable time that it will begin cannot be forecast with any certainty at present. In 1936 marketings of fed cattle were relatively large and much larger than in 1936, following the short corn crop of 1934. Prices of Choice and Prime grade beef steers at Chicago declined from about \$13 in late January 1936 to \$8.30 in early June of last year. Slaughter supplies of all cattle in that year, however, were larger than they have been in 1937 and probably were larger than they will be in the corresponding period of 1938. It now seems probable that total slaughter in the first half of 1938 will be considerably smaller than in the first half of 1936 and somewhat smaller than in the present year. The decline in prices of the better grades of cattle next year, therefore, may be no greater than in 1936 and will be from a higher level.

Prices of the lower grades of slaughter cattle probably will advance seasonally during the first half of 1938 and average higher than in the first half of 1937. In the second half of the year, however, they may average lower than a year earlier. The higher prices in the first half of the year will result chiefly because of the smaller number and proportion of cows and heifers and of the lower grades of cattle in the slaughter supply.



## The outlook for beef cattle - 7.

Supplies of these kinds of cattle in the first half of the coming year will be small in relation to those of both the first half and the last half of 1937. The present unusually wide spread between prices of the better grades and prices of the lower grades of slaughter cattle will be reduced considerably during the first half of 1938 by an advance in the prices of the lower grades and a decline in those of the better grades.

Inspected slaughter, total live weight, and average prices paid by packers for cattle and calves, average 1924-33, annual 1934-36, and January to August 1936 and 1937

Year and month	Inspected slaughter <sup>1/</sup>		Total live weight		Average price per 100 pounds paid by packers	
	Cattle	Calves	Cattle	Calves	Cattle	Calves
	Thou- sands	Thou- sands	Million pounds	Million pounds	Dollars	Dollars
Ave. 1924-33 .....	8,850	4,819	8,433	848	7.48	8.78
1934 .....	9,943	6,078	9,229	1,126	4.55	4.66
1935 .....	9,666	5,679	8,794	1,075	6.54	6.95
1936 .....	10,972	6,070	10,104	1,174	6.26	6.90
Jan. - Aug.						
1936 .....	6,801	3,961	6,307	726	6.39	7.26
1937 .....	6,457	4,299	5,831	777	7.81	7.97

<sup>1/</sup> Bureau of Animal Industry. Excludes Government slaughter in 1934, 1935, and 1936.

Present indications are that prices of the best grades of cattle reached a cyclical peak in the fall of 1937 and that the highest prices paid have established a record that will stand at least until the peak of the next cattle-price cycle occurs. The total live weight of cattle slaughtered in 1938 may be less than in 1937, but the slaughter supply will include a much larger proportion of the better grades. Hence, if there is no material reduction in demand, the weighted average price of all cattle in 1938 may be as high as or higher than in 1937. The cyclical peak in average prices for all cattle, therefore, may come somewhat later than that for the best grades. But it seems fairly certain that this peak will be reached by the end of next year.

### Cattle Production Outlook

Present indications as to the size of the 1937 calf crop, total slaughter, and death losses in 1937 point to a small decrease in cattle numbers at the end of the year from the present estimate of 66,676,000 head January 1, 1937. This decrease is not expected to be more than 1 percent, in which case the number on January 1, 1938 would be about 66 million head.

Slaughter of cattle and calves under Federal inspection for 1937 is expected to total between 16 million and 16,500,000 head compared with the 1936 total of 17,042,000. Total slaughter of cattle and calves is expected to be about 25 million head. The calf crop of 1937 will be somewhat smaller than in 1936, and importations of cattle will be somewhat larger.

Most of the reduction in cattle numbers this year will again be in the area west of the Mississippi River, with some increase not unlikely in the area east of the River. This will result in a further expansion in the proportion of cattle in the latter area, which has been increasing since 1935 as shown in the accompanying table, and will bring the proportion to a new high point for many years.

The expected reduction this year will be largest in the States from Nebraska to Texas, with that in Texas being especially large and reflecting the record-marketing of both cattle and calves from that State in 1937. Present information indicates that shipments in 1937 from other States where numbers were sharply reduced following the droughts of 1934 and 1936 will be large enough to prevent any increase in numbers in those States this year.

If total cattle numbers on January 1, 1938 are smaller than a year earlier, as now seems probable, such numbers are expected to represent the low point in the current cattle-number cycle, unless there is a recurrence of drought in 1938 or 1939. Should this be the cyclical low point, the interval between the high point of the cycle reached at the beginning of 1934 and the subsequent low point will be considerably shorter than in previous cycles, and the interval between the previous low point and this low point also will be shorter than usual. This shortening of the cycle will be a result of the droughts of 1934 and 1936, and the subsequent heavy commercial slaughter of cattle from the drought areas in those 2 years, together with the large Government purchases and slaughter in 1934 as a drought-relief measure.

Should 1938 prove to be the low point of the present cycle in cattle numbers, the number of cattle in the country will be much larger than at the end of other recent cycles. Since there is not likely to be much further upward trend in cattle numbers, such as that which has carried each succeeding low and high points of the cycle to a level higher than in the preceding cycle, the increase in the next cycle from the low point to the high probably will be much smaller than in the 2 preceding cycles.

The relationship in recent years between the yearly inspected slaughter of cattle and calves combined and the numbers of all cattle on farms at the beginning and end of the year indicates that with present numbers and the proportions of the different classes of cattle, a yearly inspected slaughter of about 15 million cattle and calves and a total slaughter of about 24 million can be maintained with little reduction in numbers. An inspected slaughter of 15 million head would be considerably larger than the average of the 10 years from 1924 to 1933, amounting to 13,661,000 head.

Such a slaughter during the next 2 years, when hog slaughter will continue small, would not prevent the maintenance of a fairly high average price for slaughter cattle. If consumer demand continues at about the 1937 level during the next few years the average price of all meat animals is likely to be maintained at fairly high levels, but if and when hog production returns to normal proportions, and if there is no compensating reduction in slaughter of other livestock, the average price of all meat animals will decline. Cattle prices in the last 3 years have been maintained at levels higher than would have prevailed had hog supplies been about average. It is to be expected, therefore, that the decline in the average price of all meat animals which may be expected when slaughter supplies of hogs increase, will reflect declines in cattle prices that will be relatively as large as, or larger than, those in hog prices, even though cattle and calf slaughter may show no increase.

# The Outlook for Beef Cattle - 9

In view of the fact that present cattle numbers make possible a larger-than-average yearly slaughter supply of cattle and calves, any general tendency to increase numbers further by reducing marketings in the next few years is likely to

result in an increase in slaughter several years hence, when hog slaughter and total meat supplies will be much larger than at present. Any advantage that might accrue to cattle producers during the next 2 years from withholding cattle from market to increase numbers is very likely to be much more than offset by the greater price declines that would result later when marketings were increased. It is highly probable, however, that some expansion will occur.

The areas where cattle numbers have been reduced the most are those where few alternative enterprises are available. If and when weather conditions in these areas make possible pasture and range conditions and a production of feed crops comparable to those prevailing before 1934, it is expected that there will be a strong tendency to expand cattle production. Unless this expansion is offset by reduction in areas where cattle numbers are now relatively large, total numbers in this country will increase. Undoubtedly cattle numbers in the areas where they are now relatively large are not at the maximum that such areas can maintain in average years from present feed resources. If soil conservation or other policies tend to increase these resources further by diverting more land to grass and hay production, a further increase rather than a decrease in cattle numbers may occur.

Cattle numbers by regions, January 1, specified years

Year	:North:Atl.	:East:Cent- tral	:South:Atl.	:East:Cent- ral	:West:Cent- ral	:West:Cent- ral	:West- ern:States	:East:of Miss.:River	:West:of Miss.:River	:Total:United States	:Percentage of Total:East of Miss.	:Percentage of Total:West of Miss.
	:Thou- sands	:Thou- sands	:Thou- sands	:Thou- sands	:Thou- sands	:Thou- sands	:Thou- sands	:Thou- sands	:Thou- sands	:Thou- sands	:Per- cent	:Per- cent
1920	: 5,190	10,898	4,978	4,549	20,213	11,897	12,710	25,615	44,820	70,435	36.3	63.7
1925	: 4,472	9,721	4,241	3,777	19,464	10,503	11,195	22,211	41,162	63,373	35.1	64.9
1928	: 4,383	9,161	3,772	3,649	17,055	9,249	10,053	20,965	36,357	57,322	36.5	63.5
1930	: 4,647	9,659	3,855	3,782	18,784	10,091	10,185	21,943	39,060	61,003	35.9	64.1
1932	: 4,759	10,393	4,207	4,275	20,372	11,025	10,739	23,634	42,136	65,770	35.9	64.1
1934	: 4,879	11,101	4,732	4,831	22,938	13,510	12,271	25,543	48,719	74,262	34.4	65.6
1935	: 4,750	10,819	4,799	4,971	19,749	12,167	11,274	25,339	43,190	68,529	37.0	63.0
1936	: 4,789	11,208	4,670	4,703	20,213	11,351	11,032	25,372	42,596	67,968	37.3	62.7
1937	: 4,903	11,188	4,568	4,519	18,849	11,898	10,751	25,178	41,498	66,676	37.7	62.3





## THE OUTLOOK FOR SHEEP, LAMBS, AND WOOL FOR 1938

### Summary

The number of lambs fed this winter probably will be larger than a year earlier. Most of the increase will be in the Corn Belt States, where feed supplies are much larger and feed prices considerably lower than they were last year. Hence marketings of fed lambs in the fed-lamb season December 1937 through April 1938 will be larger than in 1936-37, the Bureau of Agricultural Economics reports. Total slaughter supplies of sheep and lambs in this period, however, may be no larger than a year earlier, since marketings from sources other than feed lots probably will be smaller.

At the beginning of the fed-lamb marketing season in December, prices of lambs probably will be higher than a year earlier, but the seasonal advance in prices from January to April next year is expected to be less than in 1937. The average price of lambs for the coming fed lamb season, December 1937 through April 1938, may be slightly lower than that of 1936-37, as the demand for meats and wool may be less favorable than in 1936-37.

Sheep numbers for the country as a whole probably will not change greatly during the next few years. Some reduction in the Western Sheep States is expected, but a further slight increase in the Native Sheep States seems probable.

In the last 3 years prices of lambs have been affected by the short supplies of hogs much less than prices of both hogs and cattle have been. If hog slaughter increases after 1938, as now seems probable, prices of lambs will be weakened much less than will prices of hogs and cattle. Consequently, after the next 2 or 3 years it is expected that prices of lambs will be higher in relation to prices of other meat animals than they have been this year.

Most factors in the wool situation now indicate that domestic wool prices in 1938 may be lower than in 1937. World supplies of wool in 1938 probably will be slightly larger than in the present year, although they will be below average. Mill consumption of wool in this country and possibly in some foreign countries in 1938 is expected to be smaller than in 1937 and wool prices are now rather high in relation to prices of other textiles.

### Supplies

The 1937 lamb crop was estimated at 30,712,000 head, or about 1 percent smaller than that of 1936, but 2 percent larger than the 5-year 1931-35 average. The reduction from last year was in the Western States, not including Texas, since the crop in the Native States and in Texas was larger in 1937 than in 1936. For the country as a whole the number of lambs saved per 100 breeding ewes on January 1 was about the same in 1937 as in 1936, increases in the Native States being offset by decreases in the Western States. The number of breeding ewes on January 1, 1937, however, was slightly smaller than a year earlier.

Estimated lamb crop in the United States and specified regions,  
average 1931-35, and annual 1935-37

Period	: Western : States ex- : cluding Tex. :	: Tex. :	: Native : States :	: United : States :
	: 1,000 : head	: 1,000 : head	: 1,000 : head	: 1,000 : head
Average 1931-35 .....	16,020	2,998	11,105	30,124
1935 .....	15,138	2,254	11,195	28,587
1936 .....	16,230	3,848	10,901	30,979
1937 <u>1/</u> .....	15,269	4,158	11,285	30,712

1/ Preliminary.

Smaller spring marketings of lambs offset by larger marketings of Texas yearling

Although the 1937 lamb crop was not greatly different from that of 1936, the early crop was smaller than that of last year and later than usual. Because the early lamb crop was late and smaller than last year and also because of short supplies of feed in some areas, marketings of new-crop lambs from April through July were smaller than a year earlier. The reduction in marketings of such lambs, however, was more than offset by a large increase in shipments of yearling lambs and wethers from Texas. Inspected slaughter of sheep and lambs for the period May through July this year was about 16 percent larger than that of the corresponding months of 1936. Supplies continued larger than a year earlier in August and September, but the increase in these months was due to larger marketings of new crop lambs.

Supply of feeder lambs about the same as last year

The 1937 lamb crop in the States where the bulk of the feeder lambs are produced was not greatly different from that of a year earlier, the larger crop in Texas being offset by reductions in Colorado, Montana, and Oregon. Last year and in other years when feed conditions in the sheep producing area of Texas were good and when wool prices were relatively high, large numbers of Texas lambs were retained for shearing and were sold as yearlings the following spring rather than as feeders in the fall. Feed conditions in the sheep-producing areas of Texas this year are less favorable than last year and wool prices have declined somewhat since last spring. It seems probable, therefore, that a larger number of Texas lambs will be sold as feeders this fall than a year earlier. Shipments of feeder lambs from Texas direct to feeders in other States in August and September were much the largest on record, and the movement probably continued heavy in October. Shipments to other areas in Texas for feeding and grazing on wheat pastures also were large.



Increased lamb feeding in the Corn Belt expected

The number of lambs fed in the Corn Belt this fall and winter probably will be much larger than a year earlier in view of the much larger production of feed crops in that area this year. Prices of corn and other feeds in the Corn Belt in the 1937-38 feeding season will be considerably lower than those of a year earlier. The number of sheep and lambs on feed in the Corn Belt States on January 1, 1937 was much smaller than in early 1936 and was the smallest number for that date since 1929.

Smaller number of lambs to be fed in Western States this year

The number of lambs fed in the Western States this season will be considerably smaller than the number fed last season. In Colorado the number fed in 1937-38 may be as large as the small number fed a year earlier, but in nearly all other States lamb feeding will be reduced, with the largest reduction in the States west of the Continental Divide. On January 1, 1937 the number of lambs on feed in the Western States was larger than on that date in either of the 2 preceding years. Marked increases over a year earlier were reported for the area west of Continental Divide, where the greatest reduction is in prospect this season.

Contract purchases of lambs in the Western States were large during July and August. The number of lambs contracted for fall delivery in the Western States this year probably was larger than in any other recent year, and contract prices paid were the highest since 1930. The large sales of lambs for fall delivery accounts in part for the reduced feeding in prospect in several Western States, since the number of lambs remaining in the area will be smaller than a year earlier. The decrease in the number of lambs fed in the Western States this year, however, is expected to be more than offset by increased feeding in the Corn Belt and other areas.

Larger marketings of fed lambs but smaller marketings of sheep and other lambs expected

The supply of fed lambs available for market for the fed-lamb marketing season December 1937 through April 1938 probably will be larger than that of 1936-37. Total slaughter supplies of sheep and lambs in the 1937-38 fed-lamb season, however, may be no larger than those of a year earlier, since marketings of sheep and lambs from sources other than feed lots are expected to be smaller. Most of the increase in marketings of fed lambs over a year earlier probably will occur before March, since the increase in feeding will be mostly in the Corn Belt, where fed lambs usually are marketed early.

In view of the probable increase in the number of lambs to be fed in Texas this fall and winter and the heavy shipments of feeder lambs into other States, and since marketings of fed lambs are usually completed before spring, the number of shorn grass fat yearlings marketed from Texas in the late spring and early summer of 1938 probably will be smaller than the record marketings of the corresponding period of 1937.

Prices

At the beginning of the 1936-37 fed-lamb marketing season (December-April) prices of fed lambs were considerably lower than a year earlier. They advanced materially in the late winter and early spring, and in April 1937 reached the highest level for the month since 1929. The average price paid by packers for sheep and lambs slaughtered under Federal inspection during the 1936-37 fed-lamb marketing season was slightly higher than that of a year earlier, and was the highest for the season since 1929-30. The higher average price was due chiefly to the improvement in consumer demand for meats and to the increase in wool and pelt values. The total live weight of sheep and lambs slaughtered under Federal inspection was larger than that of 1935-36 and was the largest for the period on record.

Spring lamb prices in 1937 higher than in 1936

Prices of Good and Choice spring lambs at middlewestern markets at the beginning of the season in early April ranged from \$12 to \$12.75, which was \$1.50 to \$2 higher than a year earlier. After continuing near this level from late April to early June, prices of spring lambs declined seasonally during the last half of June and the first half of July.

From mid-July through September prices of slaughter lambs showed little net change, although there was considerable fluctuation during this period. The monthly average price of Good and Choice lambs at Chicago was \$10.84 in July, \$10.78 in August, and \$10.56 in September. In each of these months the average price was about \$1 higher than in the corresponding months last year and the highest for these months since 1929.

Inspected slaughter, live weight, and cost to packers for sheep  
and lambs, December - April, average 1929-30 to 1933-34,  
annual 1934-35 to 1936-37

Period	Inspected slaughter 1/	Live weight		Cost to packers	
		Average	Total	Average	Total
		: pounds	: pounds	: per 100 pounds	: pounds
	Thousands	Pounds	Million pounds	Dollars	Million dollars
Dec. - Apr. -					
Average 1929-30 to					
1933-34 .....	6,759	86	583	7.56	44
1934-35 .....	6,634	87	574	7.88	45
1935-36 .....	6,863	90	616	9.49	58
1936-37 .....	7,234	89	642	9.82	63

1/ Bureau of Animal Industry. Excludes Government slaughter in 1934.

Prices of fed lambs in 1937-38 expected to average lower than in 1936-37

Prices of fed lambs at the beginning of the new marketing season in December this year probably will be somewhat higher than a year earlier. Although some seasonal advance in prices of lambs in the late winter or early spring seems probable, it is not expected that the rise in prices will be as great as that which occurred from January through April 1937. For the entire fed-lamb marketing season December 1937 through April 1938 the average price of lambs may be slightly lower than that of a year earlier. Although supplies are expected to be about the same as in 1936-37 fed-lamb season, demand for meats and wool may be less favorable than a year earlier.

Prospects for prices of spring lambs in 1938 depend to a considerable extent on the number of early lambs produced. The early lamb crop in California may be somewhat larger than in 1937 and may be marketed somewhat earlier than the early crop last year. The movement of early lambs from the Southeastern States and Missouri also is expected to be earlier than in 1937. Consumer demand for meats in the spring and early summer of next year probably will be less favorable than a year earlier. On the other hand, it is expected that marketings of new-crop lambs next spring will be accompanied by a considerably smaller movement of yearlings and wethers from Texas than was the case in 1937.

Long-time Production Outlook

The trend in stock sheep numbers and in lamb and wool production was sharply upward in all the important producing areas from 1923 to 1931. Since 1931 the total number for the entire country has been fairly stable, but changes have occurred in several regions.

From 1931 to 1937 the trend in numbers in the Native Sheep States was slightly upward, although slight decreases occurred in those States in 1934 and 1936 as a result of the severe droughts in those years. In the Western Sheep States, excluding Texas, the trend in sheep numbers has been downward since 1931. In Texas the number of stock sheep increased steadily from 1923 to 1931 and increased further from 1931 to 1937, except for a decrease in 1934, which resulted from drought. The number of stock sheep in Texas on January 1, 1937, was the largest on record and was more than twice as large as that of January 1, 1923.



Numbers of stock sheep and lambs on farms in the United States and specified regions, January 1, 1923 and January 1, 1931-37

Year	Western States, excluding Tex.	Tex.	Native States	United States
	1,000 head	1,000 head	1,000 head	1,000 head
1923 .....	18,722	3,490	10,385	32,597
1931.....	26,155	6,749	14,816	47,720
1932.....	25,567	6,952	15,235	47,754
1933.....	24,647	7,444	15,233	47,324
1934.....	24,841	8,059	15,554	48,454
1935.....	24,030	7,092	15,512	46,634
1936.....	23,423	7,234	15,734	46,391
1937 <u>1/</u> .....	23,111	8,750	15,289	47,150

1/ Preliminary.

Downward trend in sheep numbers in the West may continue

Returns to producers from lambs and wool in the last 2 years have been high in relation to those of other years since 1929. Under ordinary conditions, an expansion in sheep numbers in the Western States and Texas would be expected. In the Western States, however, ranges have greatly deteriorated as a result of 5 or 6 years of drought conditions, and it is possible that several years of favorable precipitation will be required for the carrying capacity of ranges to recover from the effects of drought. Also restrictions on the number of livestock permitted to graze on the public domain and on the forest reserves may reduce further the number of sheep grazed on Government-owned lands. It is possible, therefore, that the downward trend in sheep numbers in the Western States, excluding Texas, which has been underway since 1931, will continue for a few years more. If food and weather conditions continue favorable, there seems little likelihood that sheep numbers in Texas will decrease. On the other hand it is not likely that the marked upward trend of the past 15 years will continue during the next several years.

Further increase in sheep in Native States probable

In the Native Sheep States the slight upward trend in sheep numbers, which has prevailed since 1931, probably will continue for the next few years. Although prices of both lambs and wool have advanced materially during the last 3 years, prices of hogs and cattle have advanced even more. Hence, there will be little incentive to expand sheep production in this area. Prospects for some shift in the acreage of cash crops to hay and pasture in the Corn Belt, however, may result in a slight increase in sheep numbers in that region. Increases in prospect in the Native Sheep States probably will be about large enough to offset decreases in the Western States. For the country as a whole, sheep numbers may not change much in the next few years although a decrease is more likely than an increase.

Lamb prices not affected by short hog supplies

The recovery in prices of lambs and of cattle since 1932 has been relatively less than the rise in prices of hogs. The rise in hog prices has been due chiefly to the improvement in consumer demand for meats and the marked reduction in hog slaughter since 1933. Since 1933 the slaughter of sheep and lambs has not changed greatly, whereas cattle slaughter has increased considerably. Despite the increase in cattle slaughter, the general average of cattle prices has risen about as much as the average price of lambs. The rise in cattle prices has resulted partly from the improvement in consumer demand and partly from the reduction in supplies of hogs. Apparently prices of lambs have not been greatly affected by the shortage of hogs.

If hog slaughter increases after 1938, as now seems probable, and if cattle slaughter continues fairly large, the trend in prices of both cattle and hogs will be downward for several years, assuming no offsetting increase in consumer demand. On the other hand no material change in the slaughter of sheep and lambs is expected in the next few years. Consequently, with demand conditions remaining about the same, prices of lambs probably would not change greatly during the period in which prices of cattle and hogs would decline.

THE WOOL OUTLOOK

Production and stocks

The prospective increase in world production of wool in 1937 will be partly offset by the apparent smaller total world stocks of wool. In the spring of 1938, when the United States clip becomes available for market, it is expected that world wool supplies will be slightly larger than a year earlier.

Preliminary estimates of wool production in 15 countries indicate that production in those countries in 1937 will be about 3 percent larger than that of 1936. These countries produced about 75 percent of the world wool production, exclusive of Russia and China, in 1936. World production in 1936, exclusive of Russia and China, totaled 3,386,000,000 pounds which was slightly larger than that of 1935. For the 5 years 1931-35 world production averaged 3,398,000,000 pounds.

Southern Hemisphere wool supplies in 1937-38 larger than in 1936-37

Supplies of wool from the Southern Hemisphere in 1937-38, the bulk of which will be available for market in late 1937, are now expected to be slightly in excess of those of 1936-37, but slightly smaller than the 5-year average in 1931-35. Increased supplies are in prospect in Australia and in the Union of South Africa, the fine wool-producing countries. Supplies in Argentina, Uruguay, and New Zealand probably will be at least equal to the fairly large supplies in those countries last year. The increase in Southern Hemisphere supplies in 1937-38 is the result of larger production this year, since at the end of 1936-37 stocks were smaller than a year earlier and the smallest in several years.

Domestic wool production about equal to average

Production of shorn wool in the United States in 1937 was estimated to be about 367 million pounds, which was about 2 percent larger than that of 1936 but practically the same as the 5-year 1931-35 average. The increase in domestic wool production this year over last year was the result of a larger number of sheep shorn and a heavier average weight per fleece. Production was larger this year than last in Texas and in the Native Sheep States. In the Western Sheep States, excluding Texas, production in 1937 was smaller than in 1936.

Available supplies of apparel-class wool in the United States on September 1, including the unshorn portion of the 1937 clip, were about 15 percent larger than a year earlier when supplies were unusually small, but supplies probably were smaller than supplies on September 1 in most other recent years. Supplies of wool in the producing States in the early fall of this year were considerably larger than for several years. Total domestic wool production in 1937 will not be greatly different from that of 1936, and the smaller mill consumption of wool in late 1937 and early 1938 than a year earlier is expected to be accompanied by smaller imports of wool. Consequently, total supplies of wool in this country at the beginning of the new marketing season, April 1, 1938, probably will continue below average, but they are likely to be somewhat larger than on April 1, 1936 and 1937.

Wool stocks small in most importing countries

Such information as is available concerning supplies of wool in foreign importing countries indicates that stocks were relatively small in all countries, except Japan, at the beginning of the 1937-38 Southern Hemisphere selling season on September 1. Stocks of wool tops in continental Europe in early September also were considerably below average.



Consumption and Trade

Mill consumption of apparel wool on a scoured basis in the United States in the first 8 months of 1937 was 8 percent larger than in the corresponding months of 1936 and with the possible exception of 1935 was the largest for the 8-month period since 1923. Since March, however, consumption has declined more than usual, and the rate of consumption in July and August was lower than a year earlier.

In view of the large mill consumption since early 1935 it is possible that there has been a considerable accumulation of finished wool goods in the several channels of trade. With the probable larger stocks of finished goods and the high prices for wool as compared with other textile raw materials, mill consumption in the last 4 months of 1937 is not likely to be so large as in the corresponding months of 1936. Because of the large consumption earlier this year, total consumption on a scoured basis for 1937 probably will not differ greatly from that of last year. In 1936 consumption (on a scoured basis) was 8.5 percent smaller than in 1935, but with that exception it was larger than for any year since 1923.

Smaller domestic mill consumption in 1938 than in 1937 expected

The high rate of consumption in the past 2 years has resulted from a building-up of inventories of manufactured and semi-manufactured products, large Government orders for wool textiles, and replenishment of consumer needs, which had accumulated during the depression. The automobile industry also has utilized increased quantities of wool in the last 2 years. With stocks of manufactured goods now accumulating and with prospects for a slight decrease in consumer demand next year, mill consumption of wool in 1938 probably will be smaller than in 1937.

Mill consumption of apparel wool on a grease basis in the United States in the first 8 months of this year was not greatly different from that of the same months of 1936 and with the exception of 1935 was the largest for that period since 1923. The difference in the comparisons of consumption for 1937 with that of 1935 and 1936 on a grease basis and on a scoured basis is caused by the larger proportion of light shrinking foreign wools consumed in 1937 than in the 2 previous years.

Mill consumption of apparel wool, grease basis, 1924-33  
average, annual 1934-36 and January-June 1936 and 1937

Period	Consumption
	Million pounds
1924-33 average .....	519
1934 .....	381
1935 .....	713
1936 .....	618
Jan.-Aug. 1936 .....	592
Jan.-Aug. 1937 <u>1</u> / .....	397
Bureau of the Census.	<u>1</u> / Preliminary.

Domestic production of wool has not changed much in recent years, hence the large domestic mill consumption since 1934 has been accompanied by a decrease in stocks and by a considerable increase in United States imports. Imports for consumption of apparel wool in the first 8 months of 1937 totaled 134 million pounds compared with 75 million pounds in the same months of 1936 and were the largest for these months since 1926. Imports for the entire year of 1936 totaled 111 million pounds.

Although mill consumption in the early months of 1938 probably will be smaller than a year earlier, imports of apparel wool in the first half of next year are expected to be fairly large because of the smaller than average stocks of wool on hand in the United States.

#### Mill activity in foreign countries reduced in recent months

Conditions in the wool-textile industries of most foreign consuming countries, except Germany, showed considerable improvement in 1936. While there has been a tendency for consumption to decline in some countries in recent months, mill activity is still relatively high in the United Kingdom, Belgium, and Japan. Conditions in France thus far in 1937 have been very irregular, but some increase in mill activity in France may occur in 1938. A marked improvement has occurred in the Italian industry which is emerging from the low level of activity resulting from sanctions and unfavorable economic conditions in 1935-36. Mill consumption in Germany has continued relatively small in 1937, and the German industry is still dependent largely on barter transactions with South Africa and South America for supplies of wool. In the last 4 years there has been considerable expansion in the production and use of substitutes for wool in the German textile industry.

#### Prices

Wool prices in the domestic market advanced sharply in the latter part of 1936 and early 1937. The rise in prices was the result of strong domestic and foreign demand and relatively small supplies of wool in the United States and foreign countries. Prices in this country declined in April and May as the new domestic clip became available in quantity and then remained fairly steady until September. Chiefly as a result of the weakness in mill demand in this country and abroad, prices in both domestic and foreign markets declined in September. Quotations on Boston market were almost entirely nominal in late September.

On the basis of nominal quotations, average prices for territory combing wools in September were about 15 percent below the high point reached in February 1937, but about 10 percent higher than a year earlier, and with the exception of late 1936 and early 1937 prices in September were higher than at any time since 1929.

#### Prices in foreign markets decline

Wool prices in foreign markets fluctuated considerably during 1936-37 but a general upward trend was maintained until September. At the July 1937 series at London prices for most wools were at or near the high point for the year and were mostly higher than at any time since 1929. As a result of the general uncertainty in the world markets and apparent weakness in demand for

most raw materials, prices at the London sales in September were about 10 percent lower than in July, with the price decline somewhat greater on merino wools than on crossbreds. Prices of 70s scoured basis at London in September averaged about 10 percent higher than in September 1936, while prices of 56s averaged about 40 percent higher than a year earlier.

Wool prices high in relation to prices of other textile materials

Although prices of wool have weakened somewhat recently, they have declined relatively less than have prices of cotton or silk or of most other raw materials. As indicated in the accompanying table, domestic wool prices in September 1937 were about the same as in 1929, whereas prices of cotton and rayon were about 50 percent lower than in 1929 and silk prices were more than 60 percent lower. Even though cotton, silk and rayon are not competitive with wool for many uses, nevertheless with some textile products it is possible to decrease the quantity of wool used and increase the quantity of other materials.

Price per pound of wool, cotton, silk, and rayon yarn, United States, 1929-36, and September 1937

Year and month	Wool 1/	Cotton 2/	Silk 3/	Rayon yarn 4/	Index numbers, 1929 = 100			
					Wool	Cotton	Silk	Rayon yarn
	Cents	Cents	Cents	Cents				
1929 .....	98.1	18.20	493.3	124.6	100.0	100.0	100.0	100.0
1930 .....	76.2	12.73	341.5	105.9	77.7	69.9	69.2	85.0
1931 .....	63.1	7.90	240.1	75.8	64.3	43.4	48.7	60.8
1932 .....	47.0	6.11	156.1	66.0	47.9	33.6	31.6	53.0
1933 .....	67.0	8.36	161.2	60.9	68.3	45.9	32.7	48.9
1934 .....	81.6	12.17	129.8	58.7	83.2	66.9	26.3	47.1
1935 .....	74.8	11.77	163.3	57.3	76.2	64.7	33.1	46.0
1936 .....	92.0	11.92	176.6	58.6	93.8	65.5	35.8	47.0
1937-Sept.....	98.5	8.72	185.1	63.0	100.4	47.9	37.5	50.6

1/ Strictly combing, fine staple, territory, scoured basis, Boston market.

2/ Average at 10 designated markets, Middling 7/8 inch. 3/ Japanese silk, double extra 13-15; 78 percent white at New York. Basis for trading on New York Raw Silk Exchange. Bureau of Labor Statistics. 4/ Domestic yarn, first quality, 150 a denier. Bureau of Labor Statistics.

Lower prices of wool in 1938 than in 1937 probable.

Numerous uncertainties in the world economic situation, make an appraisal of the probable trend of wool prices in both domestic and foreign markets in 1938 more difficult than usual. At the present time most factors in the wool situation indicate that wool prices in 1938 will be lower than in 1937. World supplies of wool in 1938 apparently will be slightly larger than in the present year, although below average. Mill consumption of wool has been above average in the United States and in most foreign countries in the past 2 or 3 years. In the United States, at least, there apparently has been some accumulation of stocks of finished wool products in 1937, and this along with the prospective weakness in consumer demand in 1938 may tend to curtail the domestic mill demand for wool. The present relationship between prices of wool and prices of other textiles also is such as to reduce mill consumption of wool. In some foreign countries, however, rearmament programs and military operations in 1938 may tend to offset the weakness in mill demand for wool resulting from other factors.





## THE MOHAIR OUTLOOK FOR 1938

The marked improvement in the mohair situation that occurred in 1935 and 1936 was well maintained through the spring of 1937. Since last spring, however, mohair prices have declined materially and up to early October very little of the fall clip had been sold. Because of the relatively high prices prevailing during most of the current year, manufacturers apparently are substituting increasing quantities of coarse wool and rayon for mohair. With prospects for a smaller volume of automobile production in 1938 than in 1937, the demand for mohair from this source next year may be less favorable than in 1937. Mohair production probably was larger in 1937 than in 1936. The number of goats on hand at the beginning of 1938 will be larger than a year earlier, and a further increase in mohair production in 1938 is probable.

### Larger supplies of mohair available

Stocks of mohair at the end of 1937 are expected to be larger than a year earlier. Estimates of production for 1937 have not yet been made, but reports from Texas, where the bulk of the mohair is produced, indicate that production in that State in 1937 will be larger than in 1936. Although the larger production apparently will be offset in part by the smaller imports this year than last, mill consumption of mohair, at least beyond the stage of tops, apparently has been much smaller in recent months than a year earlier. Domestic production of mohair in 1936 totaled nearly 16 million pounds and production this year may be from 500 thousand pounds to 1 million pounds larger than in 1936. Imports of mohair for consumption from January through August 1937 totaled about 660,000 pounds, compared with about 1 million pounds for the corresponding period of 1936 and average yearly imports of 4,238,000 pounds for 1925-29.

### Mohair consumption reduced in 1937

Such evidence as is available indicates that the consumption of mohair in finished products thus far in 1937 has been smaller than the corresponding period of last year. Apparently some of the regular users of mohair followed the practice of converting raw mohair into tops soon after it was purchased. Consequently, stocks of mohair as such may not have increased greatly this year. Stocks of mohair tops in early autumn probably were larger than a year earlier. Because of the relatively high prices of mohair during the first half of this year it is reported that woolen mills have made extensive use of rayon as a substitute for mohair. Substitution of coarse wools, cotton, and rayon in plush fabric, used mostly for automobiles and furniture, apparently has been increasing. Thus, even though the production of both automobiles and furniture in 1937 has been greater than a year earlier, the quantity of mohair used in their manufacture appears to have been reduced.

### Prices

Prices of mohair advanced sharply in 1935 and 1936, and some further rise in prices occurred in early 1937. In the spring of this year price quotations at Boston for medium sorted mohair were above 80 cents per pound, and quotations for first kid hair were about \$1.10 per pound. In 1932 and 1933 prices were as low as 17-1/2 cents for medium mohair and 37-1/2 cents for first kid hair. But since April, Boston quotations on mohair and kid hair have weakened somewhat, and in recent months quotations have been largely nominal. Prices to producers also were relatively high last spring; in Texas prices of mohair from the spring clip averaged about 55 cents per pound and prices of kid hair averaged about 65 cents per pound.

Very little of the 1937 fall clip in Texas had been sold prior to early October. Small quantities were sold early for 61 cents per pound. Later the price dropped to 51 cents, and recent reports indicate that current offers by buyers are about 41 cents. Fall-shorn mohair in Texas sold last year for as high as 60 cents per pound. Although price declines in recent months have tended to improve the competitive position of mohair in relation to wool, this position is still much less favorable than it was 2 years ago.

### Foreign situation

Production of mohair in Turkey and Union of South Africa (the chief foreign producing countries) probably will be about the same in 1937 as in 1936, but it will be about 22 percent larger than the 5-year, 1930-34 average. Stocks of mohair in these two countries are relatively small and they are less than a year earlier. Although the combined production of these two countries in the last 2 years has been larger than average, stocks of mohair have been greatly reduced during this period because of the relatively large consumption in foreign countries.

Mohair prices in foreign markets in 1936-37 were the highest for many years. The average price of fleece mohair in Istanbul, Turkey in 1936-37 was 42.5 cents per pound compared with 25 cents in 1935-36. In the Union of South Africa the average export price for mohair in 1936-37 was 43 cents per pound, while in 1935-36 it was 23 cents. At the beginning of the 1937-38 season (May 1 for Turkey and July 1 for the Union of South Africa) prices of mohair were somewhat lower than the peak reached near the end of the 1936-37 season. Most of the exports of mohair from the Union of South Africa in 1936-37 as in other years, were shipped to Great Britain. The bulk of the Turkish exports went to Germany in 1936-37, but British takings of mohair from Turkey in 1936-37 were larger than in the previous year.

### Domestic production may exceed consumption in 1938

Mohair production in the United States increased from about 10 million pounds in 1924 to more than 19 million pounds in 1931. Production declined somewhat from 1932 to 1935, but in 1937 it probably will be larger than in either of the 2 previous years. Although consumption of mohair apparently exceeded production in 1935 and 1936, demand conditions were relatively favorable in both of these years and prices of mohair were low in relation to prices of other textile fibers. From 1931 through 1934 production of mohair in the United States appears to have been larger than the domestic consumption and there was a considerable accumulation of stocks in this period. If the apparent reduction in the consumption of mohair this year should be followed by another decrease in 1938, the present level of production would be larger than consumption. This would reduce the effectiveness of the tariff protection on mohair and would lead to some piling-up of stocks of mohair and mohair tops.

The relatively high prices for mohair during the last 2 years have been reflected in sharp advances in the prices of angora goats and in marked improvement in the financial situation of goat raisers. As a result, goats have been given much better care and this, in conjunction with favorable seasons, has tended to increase the percentage kid crop and to expand goat numbers. In view of the apparent liberal stocks of mohair and mohair tops in the hands of manufacturers, the present number of goats in the country seems fully ample to provide all the mohair that can be utilized in regular channels during the next few years, without any imports.



## THE OUTLOOK FOR HORSES AND MULES FOR 1938

### Summary

The number of horses and mules on farms continued to decline during 1936 although the decrease in numbers was less than in any year since 1920. The long-continued downward trend in the number of all horses and mules, the Bureau of Agricultural Economics states, will probably continue until 1940 or 1942, when it is expected that the number of colts raised will be equal to the disappearance of older animals from farms. The low point in the number of animals of working age will occur 2 or 3 years later.

During the next few years it is expected that prices of horses and mules as related to the price of all commodities, will continue on a fairly high level with possibly some tendency to decline. The price of mules will probably be maintained for a longer period than the price of horses.

The number of colts raised in 1936 was 4.9 percent of the total number of horses and mules on farms on January 1, 1937. This represents a gradual increase in this proportion since 1932, when colts under 1 year of age represented only 2.6 percent of the total number of horses and mules on farms. A continuation of this rate of increase for 3 more years will make it possible for the birth rate of colts to offset the normal disappearance of horses and mules and to maintain a total number of slightly less than 16 million head.

The number of mules of all ages declined by a greater percentage during 1936 than did the number of horses. Only about one-third of the present number of mules could be maintained by the yearly addition of the number of mule colts raised during 1936.

The average farm price of horses during the first one-half of 1937 has been about the same as during 1936. The farm price of mules has been about \$6 per head higher in 1937 than in 1936. Demand has been principally for young mares suitable for both work and breeding, and for mules. The prices of horses and mules at public markets, which were strong in the early spring of 1937, fell off during the summer months and in September were considerably lower than in September 1936. The drop in prices at public markets has not been fully reflected in the reported farm prices up to September.

The manufacture of tractors has continued at a rapid rate since 1934. A large proportion of these tractors have been sold to replace old tractors, but a much higher proportion of the new tractors are of the general-purpose type than was true 10 years ago.

Since it is probable that the need for motive power on farms will not expand greatly, the number of horses and mules of working age on farms now may represent the maximum number needed. As the annual rate of colt production increases to the point that present numbers of work animals can be maintained, the producers of horses and mules for sale should observe closely the trends in colt production and in use of mechanical power and should make adjustments in colt production in line with future demand.

Colts Increasing as Work Animals Decline

The number of all horses and mules on farms declined about 1.2 percent during 1936. This is the smallest decrease in numbers that has occurred in any one year since 1920. The number of horses and mules 2 years old and over declined by 1.9 percent in 1936 but the 784,000 colts under 1 year of age on farms on January 1, 1937, was greater than in any year since 1924. The number of colts under 1 year of age on farms on January 1, 1937, amounted to 4.9 percent of the total number of horses and mules. The ratio of colts under 1 year to all horses and mules has gradually increased since 1932 when colts made up only 2.6 percent of the total number of horses and mules.

Estimated number of horses and mules  
on farms January 1

Year					Ratio of		Disappearance <sup>1/</sup>
	Total	2 years	1 to 2	Under	Decrease	colts under	
	horses	old	years	one	in	one year	of horses
	and	and		year	horses	to all	and mules
	mules	over			and	horses and	over one
					mules	mules	year of
							age
	Thousand Head				Percent		Percent
1920	25,817	22,455	1,753	1,609	-	-	-
1925	22,569	21,038	772	759	-	-	-
1930	19,124	17,981	569	574	3.43	3.00	6.16
1931	18,468	17,375	571	522	3.55	2.83	6.06
1932	17,812	16,822	526	464	2.67	2.60	5.28
1933	17,337	16,404	468	465	1.96	2.68	5.11
1934	16,997	15,984	467	546	1.85	3.21	5.78
1935	16,883	15,471	544	668	2.18	4.00	6.58
1936	16,319	14,926	659	734	1.16	4.50	5.96
1937	16,130	14,636	710	784	-	4.86	-

<sup>1/</sup> This figure consists almost entirely of death loss including slaughter. It also includes imports and exports, sales of horses for non-farm use, and any other disappearance from farms.

The proportionate decrease in numbers of horses and mules during 1936 was greatest in the West North Central and the Western States. In the North Atlantic and East North Central States the number of horses and mules on farms on January 1, 1937, was practically the same as a year earlier. In the South Atlantic States there was an increase of 16,000 horses and mules on farms during 1936. This 1.1 percent increase consisted largely of mules purchased from other areas. As is usually the case, the ratio of colts to all horses and mules was highest in the North Central and Western States.

Number of horses and mules on farms January 1, 1937 with percentage  
change during 1936 and proportion of colts under 1 year of  
age, by geographic divisions

Geographic division	Number on farms			Ratio of		
	Jan. 1, 1937			Horse : Mule :		
				Change: colts : colts : All colts		
				during: under one: under : under one		
	Horses	Mules	Total	1936	year to	one year:
					all	to all
					horses	mules
						and mules
	Thousands			Percent		
North Atlantic	812	63	875	-0.12	1.85	1.71
East North-Central	2521	237	2758	40.04	5.59	5.40
West North-Central	4076	473	4549	-2.74	6.72	6.53
South Atlantic	493	1011	1504	1.08	4.26	1.60
South Central	1890	2694	4584	-0.69	5.71	3.53
Western	1735	125	1860	-2.36	7.72	7.37
U. S. total or						
average	11527	4603	16130	-1.16	6.01	4.86

The number of mules declined by a greater percentage during 1936 than did the number of horses, and the number of mule colts under 1 year of age on January 1, 1937, made up a much smaller percentage of the total number of mules than was true in the case of horses. The number of mule colts under 1 year of age on January 1, 1937 was 2.0 percent of the number of all mules while horse colts under 1 year of age comprised 6.0 percent of all horses. Assuming a 6 percent annual disappearance of horses and mules over 1 year of age, there would be enough horse colts to replace all of the 1937 number of horses, enough mule colts to replace 32 percent of the 1937 number of mules, and enough of all colts to replace 81 percent of the 1937 number of horses and mules combined, if as many colts were raised annually in the future as in 1936.

If the average rate of increase in the number of colts that have been raised each year since 1932 is continued for 3 more years, the rate of births will be high enough to offset the normal disappearance of animals and to maintain a total number of horses and mules of slightly less than 16 million head. The rate of increase in the birth rate of colts, however, tapered off somewhat in 1936. An increased rate of disappearance due to the higher proportion of horses and mules in the older age groups, together with a slightly lower rate of increase in colt production, might postpone until about 1942 the date at which the decline in numbers of horses and mules on farms will be stopped. On the other hand, more nearly normal feed supplies with lower prices for feed grains may accentuate the rate of increase in the number of colts so that the total numbers of horses and mules will begin to increase slightly after 1940. There is some indication also, that the performance of the heavier field work by tractors has increased somewhat the life expectancy of work animals.

The continued good demand for young mares indicates that the ratio of colts to all horses and mules will continue to increase. The rate of increase in the number of colts raised in 1936 was not so great as in 1933, 1934, or



1935. The high feed prices following the 1934 drought probably had some influence in slowing down the increase in number of mares bred in 1935 which foaled in 1936. The data concerning the enrollment or licensing of stallions or jacks for public service have not been summarized since 1934. Between 1932 and 1934, the number of stallions and jacks enrolled in 22 States increased 35 percent as compared with a 44 percent increase in the number of colts raised in the United States in the same year. The lower rate of increase in colts in 1936 as compared with the years 1933 to 1935 may be partially due to the limited number of available sires, especially jacks.

#### Prices Variable

The average farm price of horses and mules in March 1937 was higher than at any time since 1920. In April, May, and June the farm price of horses was lower than in the same months of 1936 although the seasonal decline from June to September was less than in the corresponding period in 1936. On the principal markets, horse prices have been lower during most of the first 9 months of 1937 than during the same months of 1936.

The farm price of mules was about \$6 per head higher in both April and September of 1937 than in the same months of 1936. Market prices of mules dropped considerably during September, however, because of a less favorable demand situation in the Cotton Belt. The farm price of horses and mules in September 1937 does not fully reflect the effect of lower prices in the public markets.

Average price per head of horses and mules,  
April 15 and September 15, 1937

Year	Horses		Mules	
	Apr. 15	Sept. 15	Apr. 15	Sept. 15
1930	\$ 70	\$ 61	\$ 87	\$ 72
1931	61	52	73	62
1932	57	53	65	62
1933	61	62	68	70
1934	76	71	88	84
1935	91	88	106	103
1936	101	90	115	107
1937	100	93	121	113

Average prices of horses and mules during the first 9 months of 1937 have been between 70 and 80 percent of average prices for the corresponding period of 1909-14. The higher-than-normal proportion of horses on farms in 1937 that are in the older age groups makes it seem probable that the present prices of young horses and mules do not differ greatly from the pre-war average. In terms of the wholesale price of all commodities, however, the prices of horses and mules in the first half of 1937 have not averaged over three-fourths as high as during the pre-war period.

Recent increased imports of horses from Canada probably have had very slight influence on the average price of horses in the United States. During 1936 and the first one-half of 1937, horses were imported at the rate of 20,000 per year, which is about 15,000 more than the annual imports for several years previous to 1936. The increase in imports of 15,000 head of horses per year is equivalent to about 2 percent of the 1936 colt crop, or about 4 percent of the total receipts of horses and mules at public stockyards. Most of them have been bought by dealers for sale to farmers in the North Atlantic States.

### Production Outlook

The total supply of animal and mechanical power on farms in the United States is greater now than at any time in the past. Between 1920 and 1930 an increase of 374,000 tractors, 761,000 motor trucks, and 1,908,000 automobiles on farms, was associated with a decline of 3,711,000 horses and mules over 2 years of age. Between 1920 and 1937 there has been a further decline of 3,525,000 horses and mules over 2 years of age, together with a further increase in the number of tractors. Since 1934 more tractors have been bought by farmers than were necessary to replace worn-out tractors on farms. During the same period the decline in numbers of horses and mules has become smaller and smaller, and colt numbers have increased. It does not appear probable that there will be a need for any material increase in total motive power on farms, such as would be brought about by a decided increase in the present numbers of both work animals and tractors on farms.

It is unlikely that the manufacture of tractors for use on farms in the United States will continue for many years at the rapid rate experienced during 1935-37. In the first place, a large proportion of the tractors sold during the last 3 years merely replaced other tractors that had become worn out. The extensive droughts of 1934 and 1935 caused high prices for horse feed which gave tractor dealers an unusual advantage in making sales to farmers. The ratio between the price of horse feed and the price of tractor fuel will be more favorable to the use of horses during normal crop seasons.

Although less than one-fourth of the farms in the United States now have tractors there are large areas where the use of tractors is not expected to expand greatly. In the important cotton and tobacco States of the southeastern part of the United States the increased use of tractor power has been much less than in other sections of the country. For example, only 0.7 percent of the farmers in Georgia had tractors in 1920 and only 2.1 percent had tractors in 1930. In Virginia 1.2 percent of the farmers had tractors in 1920 as compared with 5.4 percent in 1930. On the other hand, the proportion of farms in Illinois having tractors increased from 9.2 percent in 1920 to 30.8 percent in 1930 and in North Dakota from 15.2 percent in 1920 to 43.8 percent in 1930.

The prospect for changes in the use of mechanical power is an important factor in the consideration of the future outlook for horses and mules. A much higher proportion of the new tractors are of the general-purpose type for use on farms where row-crops predominate than was true 10

years ago. Of the wheel tractors manufactured in 1931, 42 percent were of the general-purpose type, as compared with 76 percent of the wheel tractors manufactured in 1936 which were general-purpose tractors. Of the wheel tractors sold for use in the United States in 1936, 84 percent were of the general-purpose type. The manufacture of general-purpose tractors for use on smaller sized farms, together with the more nearly widespread adaptation of farm labor and machinery to the use of mechanical power are factors that may encourage the more general use of tractors in the future.

As it is probable that the total need for power on farms will not expand greatly, the number of horses and mules of working age on farms now may represent the maximum number needed. As the annual rate of colt production increases to the point that present numbers of work animals can be maintained, the producers of horses and mules for sale should observe closely the trends in colt production and in use of mechanical power and should make adjustments in colt production in line with future demand.



## THE SOYBEAN OUTLOOK FOR 1938

### Summary

Largely because of an estimated 27 percent increase in soybean production and a marked increase in the production of cottonseed, the Bureau of Agricultural Economics points out in its annual outlook that the unusually favorable market for soybeans last season is not likely to continue in 1937-38; and prices to growers are expected to average considerably below the 1936-37 average of \$1.27 per bushel. With soybean production somewhat under the record production in 1935, however, prices will probably be maintained a little above those of 1935-36, when the average was 79 cents per bushel.

The price outlook for soybeans is dependent on the outlook for soybean oil and meal. Since increased production of these products will be accompanied by larger supplies of competing products, especially cottonseed oil and meal, prices both of oil and meal are expected to be lower than last season. The decline will probably be more marked in the case of soybean meal, since the continuance of relatively low lard supplies is expected to support prices of edible oils.

The outlook in the last part of 1938 will depend on the production of soybeans and competing products in that year. In so far as the various factors can be evaluated at the present time, it appears probable that the demand for soybeans late in 1938 will be about the same as, or slightly larger than, demand for the 1937 crop. Consequently, a production next year equal to, or only slightly larger than, the 1937 production would probably cause little change in the market situation for soybeans. But prospective demand conditions do not appear to warrant any marked expansion in production.

### Acreage and Production

The 6,049,000 acres of soybeans grown alone for all purposes in the United States this year are 7.3 percent above the corresponding acreage last year, and larger than in any previous year with the exception of 1935. With practically all of this acreage increase occurring in the North Central States where commercial production of soybeans is most important, and with unusually high yields expected, production this year will show a much larger relative increase than total acreage.

Based on October 1 conditions, estimated production in the 6 important commercial producing States of Ohio, Indiana, Illinois, Iowa, Missouri, and North Carolina is 35,539,000 bushels, 29 percent larger than 1936 production in these States. Since production in all other States is not likely to be much over 2 million bushels, the total production in the United States this year will probably be about 38 million bushels. This is 3 million bushels above last year's production, but 6 million less than the record production in 1935.

After allowing for seed requirements, about 30 million bushels will be available for crushing in 1937-38. The quantity actually crushed domestically will depend on too many factors to allow for an accurate estimate at the present time; but if exports from the current crop are small, at least 25 million bushels are likely to be crushed, which would equal crushings in the United States in 1935-36.

### Elements in the Outlook

The outlook for soybeans in commercial channels, however, depends less on the supply of soybeans available for crushing than on supplies of competing products, the most important of which are cottonseed, flaxseed, and lard. Prices paid to growers for soybeans harvested for crushing depend largely on the prevailing prices of soybean meal and soybean oil, which in turn depend on general supply and demand conditions in their respective fields. Consequently the feed outlook and the fats and oils outlook are important elements in the outlook for soybeans.

### The Feed Situation

Soybean meal is used largely as a dairy and other livestock feed, competing with other high-protein feeds, the most important of which are cottonseed and linseed meals. The quantity of soybean meal entering other channels is relatively small. It is estimated that about 93 percent of 1935-36 production was used as a domestic feed, with another 4.5 percent entering feed markets in foreign countries. The remainder, less than 3 percent of production, was used chiefly in the form of flour, glue, and plastics.

Prices of soybean meal, therefore, are fixed in the feed market, and are dependent on total supplies of protein concentrates relative to demand. Because of drought conditions, reduced production of soybean meal, and relatively low supplies of other feedstuffs, prices of soybean meal in the last half of 1936 and during the first 7 months of 1937 have been rather high, averaging more than \$40 per ton. But with larger supplies in prospect for 1937-38, prices have fallen off during the last few months.

Total production of high-protein feeds in 1937-38 is expected to be considerably larger than production in recent years. Around 2.8 million tons of cottonseed cake and meal are likely to be produced, compared with a little over 2 million tons last season. Production of soybean cake and meal will also be larger than the estimated 1936-37 production of 490,000 tons, and may be about 600,000 tons provided exports of soybeans are small. Although the domestic flaxseed crop this year is a little larger than last year, the supply of linseed meal available for domestic utilization will depend largely on the quantity of flaxseed imported for crushing, and on the proportion of the cake and meal which is re-exported.

Feedstuff prices during 1937-38 will be materially lower than last season, but may average slightly higher than in 1935-36. Although total supplies are considerably larger than 2 years ago, demand is stronger because of higher prices of livestock and livestock products. In the case of high-protein feeds, however, the substantial increase in supply may result in prices no higher than in 1935-36, despite the improved demand for both domestic consumption and export. Prices of soybean meal, therefore, will be materially below last season's prices, and may not greatly exceed those of 1935-36 when the average was around \$25 per ton.

### The Fats and Oils Situation

Since food products account for about four-fifths of the total factory consumption of soybean oil, the outlook for soybean oil will be similar to the general outlook for edible oils. Soybean-oil utilization in food products has been increased in recent years because of the relatively low lard supplies, with cottonseed, soybean, and other edible oils being used in increased quantities in the production of lard substitutes.

Total production of edible vegetable oils during the 1937-38 season will be considerably larger than last year. Production of cottonseed oil, the most important oil used in lard substitutes, will probably be about 1.8 billion pounds compared with less than 1.4 billion pounds in 1936-37. Soybean-oil production is likely to exceed production from the 1936 crop by 20 percent or more; and there may be a slight increase in the total production of peanut, corn, and other minor edible oils.

With lard supplies still relatively low, a fairly good market for soybean oil in food products will probably continue; but prices of edible oils in general are likely to be somewhat lower than last year because of increased production.

There is considerable uncertainty as to prospective demand for soybean oil in the drying-oil industries. Since soybean oil for use in paints is frequently mixed with tung or perilla oil, the possible shortage of tung oil due to hostilities in China, and the increased cost of perilla oil due to the excise tax and higher ocean transportation costs may tend to reduce soybean-oil utilization in the drying-oil industries. On the other hand, the price of linseed oil is now between 4 and 5 cents per pound higher than the price of soybean oil, and a continuance of this large price spread would tend to encourage the use of soybean oil as a substitute for linseed oil. Production of linseed oil from domestic flaxseed will be increased slightly over last year, but the United States will still depend largely on imported flaxseed for its supply of linseed oil.

In the year beginning October 1935, prices of soybean oil averaged between 7 and 8 cents per pound, and in 1936-37 they averaged about 9 cents per pound. Although the expected low supplies of lard during 1937-38 will probably prevent any very sharp drop in the price of soybean oil, some decline is expected because of the increased production of cottonseed and soybeans; and prices of soybean oil may average slightly below the 1935-36 level.

### The Foreign Situation

Exports of soybeans from the United States in past years have been small relative to total production, and have depended on sufficiently large supplies and low prices in this country to enable American exporters to compete successfully with Manchurian soybeans in European markets.

Imports of soybeans into European countries have declined steadily since 1933, largely because of drastic curtailments in German imports, and no marked increase in European purchases is probable in the near future. On the other hand, soybean production in Manchuria, the most important commercial producing country, has been increasing since 1934; and the latest information places this



year's production at 157 million bushels compared with 152 million bushels for 1936. Movement of the Manchurian crop this year may be retarded somewhat because of lack of transportation facilities and higher costs of ocean shipping. In view of increasing production in Manchuria, however, it is not probable that prices in this country will be low enough to allow for a very large volume of exports from the 1937 crop in the United States.

Imports of soybean oil and meal into this country have been relatively small and are not likely to increase significantly.

#### The Price Outlook for Soybeans

With prices of soybean meal expected to be much lower, and prices of soybean oil somewhat lower than during the 1936-37 season, prices to growers for the 1937 soybean crop are likely to average considerably below the 1936 average of \$1.27 per bushel. The fact that this year's production is expected to be about 14 percent below the 1935 production, however, will probably suffice to keep soybean prices a little above the 1935-36 level when the season average was 79 cents per bushel.

The outlook for the last part of 1938 is less certain, and will depend on production in that year of cottonseed, flaxseed, lard, and other products that are competitive with soybeans and soybean products, as well as on the 1938 production of soybeans. A marked reduction may occur in the 1938 production of cottonseed; but this is likely to be offset, to some extent at least, by increasing supplies of lard in the latter half of 1938. The lower prices that growers will receive for the 1937 production of soybeans will probably discourage any increase in the acreage of soybeans for crushing in 1938. If this proves to be the case, and production in 1938 is no larger than in 1937, the market situation will probably be similar to that for the 1937 crop.

Further expansion of commercial soybean production is feasible whenever price relationships are favorable. Many Corn Belt farmers with suitable land have not as yet introduced soybeans into their cropping systems, and others are growing soybeans only for hay. Present and prospective demand conditions, however, indicate that a material expansion in production in the immediate future would have an unfavorable reaction on price.

Acreage, yield per acre, and production of soybeans in the United States,  
1924-37

Year	: Total : <u>1/</u>	: Acreage : except : for hay: : <u>1/</u>	: Acreage : harvested : for : beans <u>1/</u>	: Yield : per : acre	: Production: : all- : purposes	: Acreage grown : alone for : all- : purposes	: Production : six important : States : <u>2/</u>
	: 1,000 : acres	: 1,000 : acres	: 1,000 : acres	: Bushels : bushels	: 1,000 : bushels	: 1,000 : acres	: 1,000 : bushels
1924	: 1,782	635	448	11.0	4,947	1,567	3,905
1925	: 1,785	610	415	11.7	4,875	1,539	3,701
1926	: 2,127	696	466	11.2	5,239	1,871	4,096
1927	: 2,350	794	568	12.2	6,938	2,057	5,560
1928	: 2,439	830	579	13.6	7,880	2,154	6,588
1929	: 2,736	994	708	13.3	9,398	2,400	7,976
1930	: 3,387	1,366	1,003	13.4	13,471	3,010	12,405
1931	: 4,194	1,494	1,104	15.2	16,733	3,738	14,938
1932	: 4,049	1,374	977	15.3	14,975	3,595	13,524
1933	: 3,777	1,334	997	13.2	13,147	3,365	11,591
1934	: 5,994	1,925	1,539	15.0	23,095	5,572	21,396
1935	: 7,111	3,111	2,697	16.5	44,378	6,640	42,357
1936 <u>3/</u>	: 6,312	3,103	2,113	14.0	29,616	5,635	27,459
1937	:	:	:		<u>4/</u> 37,700	<u>3/</u> 6,049	<u>5/</u> 35,539

1/ Includes allowance for acreage grown with corn and other crops in States where interplanting is extensively practiced. 2/ Ohio, Indiana, Illinois, Iowa, Missouri, and North Carolina. 3/ Preliminary. 4/ Estimated.  
5/ Indicated October 1.

Soybean production in specified States, average 1928-32, annual  
1936 and 1937

State	: Average : 1928-32 : 1,000 : bushels	: 1936 <u>1/</u> : 1,000 : bushels	: 1937 <u>2/</u> : 1,000 : bushels	: Change : Percent
Ohio .....	522	2,092	2,538	+ 21.3
Ind. ....	1,982	3,948	5,389	+ 36.5
Ill. ....	5,869	17,216	22,135	+ 28.6
Iowa .....	736	2,483	3,340	+ 34.5
Mo. ....	800	245	585	+138.8
N. C. ....	1,187	1,475	1,552	+ 5.2
Total, six States....	11,096	27,459	35,539	+ 29.4

1/ Preliminary. 2/ Indicated October 1.

Soybeans: Production, exports, quantity crushed, quantity used for feed or seed, and average farm price, 1924-37

Year be- ginning October	: Production	: Crushed 1/	: Exported 2/	: Total crushed and exported	: Percent of production	: Used for feed or seed 3/	: Average farm price
	: 1,000 bushels	: 1,000 bushels	: 1,000 bushels	: 1,000 bushels		: 1,000 bushels	: Cents per bushel
1924	: 4,947	307	--	307	6.2	4,640	247
1925	: 4,875	351	--	351	7.2	4,524	234
1926	: 5,239	335	--	335	6.4	4,904	200
1927	: 6,938	559	--	559	8.1	6,379	183
1928	: 7,880	882	--	882	11.2	6,998	190
1929	: 9,398	1,666	--	1,666	17.7	7,732	187
1930	: 13,471	4,069	--	4,069	30.2	9,402	132
1931	: 16,733	4,725	2,161	6,886	41.2	9,847	48
1932	: 14,975	3,470	2,450	5,920	39.5	9,055	56
1933	: 13,147	3,054	--	3,054	23.2	10,093	98
1934	: 23,095	9,105	19	9,124	39.5	13,971	101
1935	: 44,378	25,181	3,490	28,671	64.6	15,707	79
1936	: 4/ 29,616	5/ 20,500	5/ --	5/ 20,500	69.2	5/ 9,116	4/ 127
1937	: 5/ 37,700						

1/ From Animal and Vegetable Fats and Oils, Bureau of the Census. 2/ Inspected for export by Federal licensed inspectors. 3/ Production minus quantity crushed and exported. 4/ Preliminary. 5/ Estimated.

Production of soybean, cottonseed, and linseed oils and meals in the United States, average 1928-32, annual 1933-36

Marketing year 1/	: Oil	: Cake or meal	: Oil	: Cake or meal	: Oil	: Cake or meal
	: Cottonseed 2/	: Soybean 3/	: Linseed 3/	: Cottonseed 2/	: Soybean 3/	: Linseed 3/
	: Million pounds	: Million pounds	: Million pounds	: Thousand tons	: Thousand tons	: Thousand tons
Average	:	:	:	:	:	:
1928-32	: 1,552	25	527	2,235	71	528
1933	: 1,303	26	443	1,888	74	414
1934	: 1,109	78	404	1,614	223	381
1935	: 1,164	209	506	1,739	600	480
1936	: 4/ 1,364	5/ 170	4/ 586	4/ 2,031	5/ 490	4/ 544

1/ Cottonseed oil and meal, year beginning August; soybean oil and meal, year beginning October; linseed oil and meal, year beginning July. 2/ Compiled from Cotton Production and Distribution, Bureau of the Census. 3/ Compiled or computed from data in Animal and Vegetable Fats and Oils, Bureau of the Census. 4/ Preliminary. 5/ Estimated.



## Soybeans - 7

Prices of soybeans, soybean oil, and soybean meal, specified localities, by months, October 1934-September 1937

Year and month	Soybeans : United States : farm price : per bushel : <u>1/</u>	Soybeans : Illinois : farm price : per bushel : <u>1/</u>	Soybeans, : U. S. No. 2 : yellow, price : per bushel : net track : Chicago <u>2/</u>	Soybean oil : crude, price : per pound in : tank cars : mid-western : mills <u>3/</u>	Soybean meal, 41 : percent protein, : price per ton, : bagged, Chicago : <u>4/</u>
	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Dollars</u>
1934-35					
Oct.	95	75	86	6.1	38.50
Nov.	89	80	96	6.3	38.80
Dec.	111	105	124	7.3	41.20
Jan.	119	110	127	7.8	40.70
Feb.	126	115	129	8.1	38.40
Mar.	120	105	113	9.1	37.10
Apr.	118	105	110	8.4	33.80
May	121	110	107	8.8	33.20
June	119	110	95	8.6	31.70
July	98	85	--	7.8	29.10
Aug.	73	60	--	7.1	24.00
Sept.	69	60	72	7.7	22.80
1935-36					
Oct.	68	60	73	8.1	25.60
Nov.	69	65	81	8.1	24.40
Dec.	72	70	87	8.1	25.50
Jan.	76	75	88	7.6	25.20
Feb.	77	75	85	7.2	23.90
Mar.	78	75	82	6.8	23.30
Apr.	78	75	83	6.8	23.30
May	83	80	85	6.3	24.80
June	85	80	91	6.0	26.10
July	105	100	122	7.9	38.90
Aug.	119	115	142	8.0	44.30
Sept.	110	105	127	8.2	39.70
1936-37					
Oct.	107	105	123	8.0	36.90
Nov.	112	110	123	8.0	39.20
Dec.	130	130	146	9.1	43.00
Jan.	142	140	161	9.8	44.10
Feb.	150	150	159	9.9	41.50
Mar.	152	145	159	9.8	41.10
Apr.	166	160	174	9.8	47.60
May	174	170	175	9.0	48.30
June	150	140	140	8.2	39.20
July	132	120	139	7.8	37.30
Aug.	102	90	112	--	34.90
Sept.	90	80	93	--	34.20

1/ Weighted average price on the 15th of each month. 2/ Compiled from Chicago Daily Trade Bulletin; prices "track country points" converted to "net track Chicago" by adding average freight from Illinois-Indiana points to Chicago; average of weekly prices. 3/ Compiled from Oil, Paint, and Drug Reporter; average of Friday quotations. 4/ Published in Crops and Markets, United States Department of Agriculture; average of weekly prices.



## THE FLAX OUTLOOK FOR 1938

### Summary

Some increase in world flaxseed supplies is probable in 1938-39 over the short supplies of 1937-38, with an increase in production partially offset by a small carry-over of old seed on August 1, 1938, according to the Bureau of Agricultural Economics. About the same world demand for flaxseed and flaxseed products is in prospect in 1938 as in 1937.

Since the low point of the 1932 utilization of drying oils in the United States has increased steadily, but up to the end of 1936 the percentage that linseed oil contributed to the total use dropped from 77 to 61 percent. Since the beginning of 1937 both the percentage and the actual amount of linseed oil consumed has increased rapidly. Changes in price relationships in 1937 between linseed oil and other drying oils will, while maintained, tend to place linseed oil in a more favorable position relative to other drying oils.

In the flaxseed-producing areas the outlook is for higher average gross returns per acre from flaxseed than from wheat if about average yields are obtained in 1938.

As indicated in the wheat outlook, world wheat production in 1938 may be in excess of prospective world requirements, if about average yields are obtained on the present large world wheat acreage, and prices of wheat and returns to wheat growers in the United States may be expected to be materially lower than during the current marketing season. Returns per acre from flax during the current year have been higher than from wheat, despite relatively high wheat prices.

Flax acreage might be increased as much as 30 percent over the 1935 and 1936 seedings without danger of producing more seed than would be needed to supply domestic needs.

### Flaxseed Demand Remains at High Levels

World demand during the first part of the 1937-38 marketing season has been slightly stronger than during the first months of the 1936-37 season.

There may be some lowering of present levels of demand during the next few months. On the other hand, prospective short crops in Argentina (harvest of which begins in December) may become more of a price factor as the season advances.

The total volume of building activity in the four principal linseed-oil consuming countries - the United States, United Kingdom, Germany and France - averaged about 2 percent higher in the first 7 months of 1937 than in the same months in 1936. The volume of construction in the United States during the first 8 months of 1937 was about 8 percent over that of a year earlier but the total volume of construction in 1938 is expected to be only slightly greater than in 1937. In the three European countries the peak of building activity appears to have been reached and a smaller volume of construction is in prospect in 1938 than in 1937. The reduction in the use of linseed oil in Europe as a result of a slackening in building activity may be partially offset so far as imports of



flaxseed are concerned by an increased demand for linseed cake and meal, as a result of smaller feed grain supplies. The corn, barley, and oats crops combined are about 10 percent smaller than last year's moderate harvests.

Utilization of flaxseed in European countries has held at a relatively high level. Imports into the principal deficit areas of Continental Europe and into the United Kingdom have been above those of last season while trade advices indicate maintenance of a high rate of crusher activity and a steady movement of flaxseed products into consuming channels. Disappearance of oil and meal have kept pace with increased production with no appreciable accumulation in stocks.

World shipments of flaxseed, July 1936 through June 1937, totaled about 88,648,000 bushels compared with 69,956,000 bushels during the preceding season. Shipments during the first 3 months of the current season totaled approximately 17,500,000 bushels against 19,000,000 bushels in the corresponding period last year.

#### Flaxseed Supplies Likely to be Larger in 1938-39

World production of flaxseed in 1938-39 seems likely to be considerably above that of the current year. Unfavorable seeding conditions reduced the Argentine acreage for the 1937 harvest substantially below that of the preceding year and below the average of the 5 years 1931-35.

With averaging seeding conditions in 1938 the Argentine acreage seems likely to show a substantial gain over the small acreage this year. The United States acreage seeded for the 1937 crop was the smallest of recent years and about 55 percent of the 1936 seedings but the acreage for harvest was only about 10 percent smaller than that of a year ago. Canadian acreage for harvest was only a little more than half that of 1936. In Europe the recent upward trend in flaxseed seedings seems likely to continue during 1938. In North Africa and Russia no significant change in acreage from recent years is in prospect but in the Orient the Chinese-Japanese war may reduce the acreage of flax and other oilseeds. Seeding of the new Indian crop is proceeding under favorable conditions with adequate soil moisture for germination and early development of the new crop.

#### Flaxseed crop much smaller in 1937

The 1937 world crop of flaxseed will probably show a material reduction from that of the preceding year principally as a result of the short Argentine crop. In the Northern Hemisphere outturns show little change from those of a year ago with the reduction in North American and certain European and North African countries apparently offset by the good Russian harvest and with only moderate changes in other producing areas. No official estimate is yet available for Argentina but a decrease of 15 percent in seedings with serious drought damage in some areas suggest a crop well below the 73,000,000 bushels harvested in 1936-37.

United States supplies of flaxseed for the 1937-38 season are now placed at 10,979,000 bushels compared with 9,239,000 last year. Allowing for usual seed requirements, about 9,879,000 bushels would remain for commercial use compared with 8,469,000 a year earlier. Carry-over stocks July 1 were only slightly different from those of a year earlier and totaled 3,339,000 bushels as against 3,331,000 for the preceding year.

The crop was moderately larger than the very small harvest of a year ago and amounted to 7,640,000 bushels. This is a gain of nearly 29 percent over a year earlier but is about 48 percent below the 1923-32 average production of 15,996,000 bushels. The relatively small harvest in the United States was due both to greatly reduced acreages sown to flax, especially in Minnesota and the Dakotas, and to the fact that yields in these major producing States were lowered by extreme heat and inadequate rainfall during August. Minnesota, normally the largest flax-growing State, produced only about two-thirds of the 5-year average; North Dakota produced a little more than one-third, and South Dakota about one-eighth of the 5-year average crop.

Domestic disappearance of flaxseed in the United States during the 1936-37 season totaled 31,110,000 bushels as against 27,988,000 bushels a year earlier. Crushings increased to the largest quantity since 1923-30 with a total of 30,340,000 bushels against 26,544,000 a year earlier and 22,370,000 bushels the 5-year average for 1930-31 through 1934-35. During recent years annual seed requirements have been around a million bushels. During the last 10 years disappearance of flaxseed has varied materially with a range of from 18,560,000 bushels in 1922-23 to the peak of 45,040,000 in 1927-28. Since 1933 the trend in utilization has been upward with disappearance during last season above that of any other recent year.

The average acreage seeded to flax for the 5 years 1931-35 was 2,441 thousand acres, which, with an average yield of 5.7 bushels per harvested acre, produced an average of 10,070 thousand bushels. Average crushings, years beginning July 1931-35, amounted to 26,268 thousand bushels. The linseed-oil equivalent of the average domestic production of flaxseed for those 5 years, minus planting requirements, amounted to almost 41 percent of the linseed oil consumed in the United States.

In the year 1936, flax seedings amounted to 2,392 thousand acres of which 2,026 thousand acres were harvested, with an average yield of 6.9 bushels per harvested acre. The production of 14-1/2 million bushels supplied seeding requirements for the following year and, in terms of oil equivalent of the flaxseed, 52 percent of the domestic linseed-oil requirements for the year beginning July 1936. A 30 percent increase above the seeded acreage of 1935, with the same percentage of harvested acreage as in 1935 and with an average yield of 9.5 bushels per acre (the highest recorded average yield since 1920) would produce about 26 million bushels or about 5 million bushels less than total crushings of domestic and imported seed for the year beginning July 1936, plus seed planted for the 1937 crop.

Canada has harvested a crop of 741,000 bushels, or less than half the small outturn of a year ago when production was placed at 1,735,000 bushels. Carry-over stocks, however, were slightly larger than a year earlier, totaling 465,000 bushels as compared with 269,000 for the preceding year. Allowing for estimated seed requirements, commercial supplies for 1937 would total about 1,006,000 bushels compared with 1,842,000 bushels in 1936. During the last 5 years Canada has been a net importer of flaxseed and the short crop this season suggests a continuation of imports during the 1937-38 season.

The crop in India harvested last spring, totaled 16,720,000 bushels as compared with 15,520,000 harvested in 1936. Indian exports have been a little below those of a year ago but recent advices indicate an active demand from local

crushers with no accumulation of stocks at terminals, which suggests a larger domestic utilization and exports only a little larger than last year's exports of about 7 million, August through March.

Argentine supplies for the current year showed an appreciable gain over those of a year earlier with production placed at 76,216,000 bushels which, together with a carry-over of 1,250,000 bushels, gave an indicated supply of 78,066,000 for the season. Record exports during the early months of the Argentine crop year have moved readily into consuming channels. Domestic requirements in the Argentine are placed at around 8 million bushels, including 6,692,000 bushels for seed requirements and 1,181,000 bushels for crushing and other utilization. Argentine exports, January 1 through July 1937, totaled 46,730,000 bushels, and 2,464,000 bushels of new seed were exported prior to January 1, 1937. On this basis the 17,613,000 bushels available for export August 1 indicate a small carry-over into the new crop year beginning January 1, 1938.

The smaller world supplies and good flaxseed demand in prospect for the 1937-38 season are reflected in higher prices in both domestic and foreign markets. Although the price of flaxseed July-September 1937 averaged somewhat lower than for the same months of 1936, prices improved in late September and early October. During the first 3 weeks of October 1937, the price of No. 1 flaxseed at Minneapolis averaged \$2.13 per bushel compared with the October 1936 average of \$2.09-1/2. Canadian No. 1 N. W. seed at Winnipeg averaged \$1.77 against \$1.63 a year ago and Argentine seed for November delivery at Buenos Aires \$1.33 compared with \$1.17 per bushel for October 1936.

Linseed-oil production in the United States from domestic and imported seed for the season 1936-37 was larger than for any other season since 1929-30. Stocks of linseed oil June 30, 1937 amounted to 142.4 million pounds compared with 140.7 million pounds on the same date in 1936. These stocks compare with an average end of the season stocks of 102.9 million pounds for the crop seasons 1930-31 to 1934-35, and 141.2 million pounds average at the end of the seasons 1925-26 to 1929-30.

Apparent disappearance of linseed oil during the first 6 months of 1937 amounted to 338 million pounds compared with 238 million pounds during the first 6 months of 1936.

#### United States Consumption of Drying Oils Shows Steady Increase

Consumption of oils by the drying industries in the United States has increased steadily from the low point of 475 million pounds in the calendar year 1932 to 730 million pounds in 1936, but during this period the percentage of linseed oil contributed to the total dropped from 75 to 61 percent. The decrease in the percentage of linseed oil has been balanced by increases of perilla, fish, and miscellaneous minor oils such as hempseed, castor, and citicica oils. Changes, January to June 1937, in price relationships between linseed oil and other drying oils will, while maintained, tend on the whole to place linseed oil in a more favorable position relative to these other oils.

Rough estimates of utilization of oils in the first half of 1937 by the drying industries, indicate a total of about 469 million pounds compared with about 395 million pounds in the same period in 1936. Most of this increased



consumption was contributed by linseed oil. Use of perilla and hempseed oils dropped sharply as the result of the excise taxes which amounted to 4-1/2 cents per pound on imports of perilla and hempseed oils and 2 cents per pound on the seeds, effective August 21, 1936. Imports of perilla oil began again in the second quarter of 1937.

Tung oil: Imports of tung oil into the United States during 1936 were larger than for any previous year, and imports for the first half of 1937 exceeded those of the first half of 1936.

Supplies of tung oil in China, from which most of the United States imports are obtained, have been more abundant than usual as a good crop was harvested in the fall of 1936. No reports on the size of the 1937 crop are available. This crop is now ripening and the crushing should begin in December or January. The Chinese tung-oil areas are for the most part located in the Yangtze River Basin, which is south of the areas involved in the present disturbance, but military operations in the Far East are blocking the usual trade routes and exports of tung oil from China are being adversely affected. It is probable that supplies now on hand in the United States are not large enough to meet average requirements for more than 6 to 9 months. Prices rose sharply from 12.9 cents per pound in July to 21.2 cents (nominal) in September.

Perilla oil: Perilla oil has been imported in significant quantities only since about 1930. From that time it has been of increasing importance to the drying industry, contributing 17 percent of the total drying oils used in 1936. With the imposition of the 4-1/2 cent excise tax on imports in August 1936, imports were stopped almost completely for the succeeding 6 months, although imports in 1936 prior to the tax had amounted to 118 million pounds. During the first 7 months of 1937 imports have been increasing. The first official estimate for perilla seed production in 1937 in Manchuria, the principal source of United States supplies, is 273 million pounds compared with 324 million pounds last year.

Fish oils: Domestic production of fish oils was about 267 million pounds in 1936 compared with 64 million pounds in 1931. The 1937 season is not yet far enough advanced to estimate probable production. The volume used for drying purposes in 1936 was almost double the quantity so used in 1931, and the percentage contributed to total use of drying oil increased from 4 percent to 7 percent in the same period.

Soybean oil: The quantity of soybean oil used in paint increased gradually from 1931 to 1935 but dropped off slightly in 1936. Since soybean oil is used in paints in connection with oils that dry much more rapidly, extremely high prices or short supplies of tung oil, and perilla oil will tend to discourage the use of soybean oil, in the drying industries. However, since an increase of 15 to 20 percent in the production of soybean oil is expected from this year's large crop of beans, any resultant price decline would favor its use in paint.

Estimated consumption of fats and oils in the drying  
industries in the United States, 1931-37

Year	Linseed oil 1/	Tung oil 1/	Perilla oil 1/	Fish oil	Soybean oil	Other 2/	Total
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
Average -							
1931-33	400	89	16	23	12	4	544
1934-36	450	123	63	40	16	11	703
1931	471	90	11	27	9	3	611
1932	354	74	11	20	12	4	475
1933	376	102	25	22	14	5	544
1934	409	117	24	25	13	7	595
1935	465	129	60	43	18	8	723
1936	477	121	105	52	17	18	790
Jan.-June 3/	(234)	(62)	(57)	(21)	(9)	(12)	(395)
1937							
Jan.-June 3/	(333)	(78)	(23)	(24)	(7)	(4)	(469)

The drying industries include paint and varnish, linoleum, oilcloth, and printing ink. During the last 6 years paint and varnish have averaged about 86 percent of the total.

- 1/ As drying oils are used directly as well as in factory consumption, these figures represent total domestic disappearance excluding small quantities reported by the Bureau of the Census as used in soap, shortenings, and miscellaneous products.
- 2/ Includes factory consumption of castor and miscellaneous oils, in 1931-33. In 1934, 3 million pounds each castor and sunflower oils, and 1 million pounds miscellaneous oils. In 1935, 4 million pounds castor oil, 2 million pounds oiticica oil, and 2 million pounds miscellaneous oils. In 1936, 5 million pounds castor oil, 2 million pounds oiticica oil, and 11 million pounds miscellaneous oils, probably largely hempseed.
- 3/ These data are rough estimates based largely on the relation of consumption in drying industries to total disappearance, 1931-36.

Percentage consumption of fats and oils in the drying industries in the United States, 1931-37

Year	:Linseed: oil	:Tung oil	:Perilla: oil	:Fish oil	:Soybean oil	:Other	: Total
	:Percent	:Percent	:Percent	:Percent	:Percent	:Percent	:Percent
Average -	:	:	:	:	:	:	:
1931-33	: 73	: 17	: 3	: 4	: 3	: 1/	: 100
1934-36	: 64	: 17	: 9	: 6	: 2	: 2	: 100
1931	: 77	: 15	: 2	: 4	: 3	: 1/	: 100
1932	: 75	: 16	: 2	: 4	: 3	: 1/	: 100
1933	: 69	: 19	: 5	: 4	: 3	: 1/	: 100
1934	: 69	: 20	: 4	: 4	: 2	: 1	: 100
1935	: 65	: 18	: 3	: 6	: 2	: 1	: 100
1936	: 61	: 15	: 13	: 7	: 2	: 1	: 100
Jan.-June	: (59)	: (16)	: (15)	: (5)	: (2)	: (3)	: 100
1937	:	:	:	:	:	:	:
Jan.-June	: (71)	: (17)	: (5)	: (5)	: (1)	: (1)	: 100

The drying industries include paint and varnish, linoleum, oilcloth, and printing ink. During the last 5 years paint and varnish has averaged about 86 percent of the total. 1/ Less than 1 percent.

Price per pound of specified drying oils, 1931-37

Year	:Linseed oil: raw, Minn.	:Tung oil, drums, N.Y. 1/	:Perilla oil: drums, N.Y.	:Menhaden oil, crude, f.o.b. Balto.	: Soybean oil, crude, f.o.b. mills
	: Cents	: Cents	: Cents	: Cents	: Cents
Average -	:	:	:	:	:
1931-33	: 7.3	: 6.3	: 6.8	: 2.1	: 4.7
1934-36	: 9.1	: 14.0	: 8.7	: 3.3	: 7.2
1931	: 7.8	: 7.4	: 8.1	: 2.7	: 5.5
1932	: 5.7	: 6.3	: 4.9	: 1.9	: 3.1
1933	: 8.5	: 6.8	: 7.8	: 1.3	: 5.4
1934	: 9.0	: 3.9	: 9.0	: 2.6	: 6.0
1935	: 8.3	: 17.0	: 8.2	: 4.0	: 8.1
1936	: 9.5	: 16.1	: 8.3	: 4.3	: 7.5
Jan.-June	: 9.2	: 17.1	: 7.5	: 4.6	: 6.8
July	: 9.3	: 13.9	: 9.7	: 3.7n	: 7.9
Aug.	: 10.1	: 16.5	: 9.3	: 3.6n	: 8.0
Sept.	: 9.9	: 14.4	: 9.9	: 3.6n	: 8.2
1937	:	:	:	:	:
Jan.-June	: 10.3	: 14.6	: 11.6	: 5.5	: 9.4
July	: 10.5	: 12.9	: 11.6	: 5.3n	: 7.6
Aug.	: 10.6	: 14.3n	: 12.1	: 5.3n	: 6.5
Sept.	: 10.4	: 21.2n	: 13.6	: 4.9n	: 6.2

1/ Beginning August 22, 1936, quoted as Atlantic Coast. Compiled from the Oil, Paint, and Drug Reporter, except soybean oil for July to September 1937, which is from the National Provisioner.





## THE PEANUT OUTLOOK FOR 1938

### Summary

Largely because of the peanut diversion program of the Agricultural Adjustment Administration, farmers are receiving relatively favorable prices and returns per acre for the large 1937 crop of peanuts harvested for nuts. These favorable returns are likely to result in some increase in acreage in 1938, the Bureau of Agricultural Economics says in its annual peanut outlook report.

Unless yields are substantially below average, production of peanuts will again be large in 1938. The marketing situation in 1938-39 will again depend to an appreciable extent on the demand of peanuts for oil production.

The crushing outlet in the present season is unfavorable because of low prices for competing oils and fats, and as a result, an emergency measure providing for subsidy payments for the diversion of peanuts to crushers has been inaugurated. It seems probable that prices for peanut oil in 1938-39 will not improve over the 1937-38 prices. Stocks of competing oils and fats at the beginning of the 1938-39 season, principally because of the large production of cottonseed oil from the 1937 cotton crop, are expected to be substantially larger than the relatively small stocks at the beginning of the 1937-38 and 1936-37 peanut-marketing seasons. Total supplies, however, will depend largely upon the size of the 1938 cotton crop and the volume of lard production in 1938-39. Lard production in 1938-39 is almost certain to be materially larger than in 1937-38.

### Crushing Outlet is Less Favorable

Peanut production has been at high level during recent years and will again be large in 1937, according to September estimates. If it were not for the crushing outlet the large crops produced from 1934 to 1937, inclusive, could not have been marketed except at very low prices. The 1937 crop would bring relatively low prices but for the diversion program of the Agricultural Adjustment Administration.

The diversion program enables grower cooperatives to purchase farmers' stock peanuts of the various types and grades at specified prices as follows: No. 1 southeastern Runners \$57.00 per ton; No. 1 southeastern Spanish and No. 3 or better Class A Virginias \$65 per ton; and No. 1 southwestern Spanish \$62.00 per ton. The farmer cooperatives may sell either to the edible trade or to crushers. The specified prices are materially higher than could be paid by crushers, and sales to this outlet are expected to be substantially below the purchase price, but the cooperatives will be reimbursed for these losses.

Before the 1934-35 season, peanut crushings were not important except during the World War period, and consisted largely of low-grade peanuts. The relatively small cotton crops of 1934, 1935, and 1936 and the droughts which reduced supplies of feed grains and hog marketings in this period, were reflected in reduced supplies of oils and fats and in materially improved prices for peanut oil. These improved prices for oil, together with the diversion programs

## Peanut Outlook - 2.

of 1934-35 and 1935-36 resulted in materially increased crushings of peanuts for oil. The large crushings for oil in 1936-37 of about 296,000,000 pounds were due to high prices for peanut oil and meal and the comparatively low quality of the 1936 crop of Spanish-type peanuts.

Although the oil situation is not especially favorable, prices of crude peanut oil and peanut meal at southeastern mills in October 1937 being substantially lower than a year earlier, it is expected that crushings of peanuts will again be important in the 1937-38 season, because of the diversion program.

Imports of peanut oil which have been relatively large during the last three seasons will probably be greatly reduced in 1937-38 because of military operations in the Orient and the lower prices for peanut oil.

### General Situation 1937-38 Season

The acreage of peanuts harvested for nuts in 1937, according to September indications, was 4 percent below the record 1936 acreage but it was about 15 percent above the 1928-32 average. The estimated yield per acre in 1937 is above average and the September indicated production of 1,270,150,000 pounds is only about 3 percent less than the record crop of 1935, and 34 percent above the average 1928-32 production. Stocks of old-crop peanuts at the beginning of the 1937-38 season were larger than the low stocks of either of the two preceding seasons but were still relatively unimportant. If crushings approach the average of 1934-35 - 1936-37, the supply of peanuts in 1937-38 probably will not be excessive in view of indications of a higher level of consumption of peanut products.

In Virginia, North Carolina, and Tennessee, where Virginia-type or large podded nuts are principally grown, production in 1937 is estimated at about 4 percent above 1936. The indicated 1937 production is very slightly less than the average production for 1934-36, inclusive. Carry-over of old-crop Virginia-type peanuts into the current season is small although somewhat larger than in other recent years. Owing to the relatively small oil content of Virginia-type nuts, crushings are expected to be small and largely confined to the lower grades. Supplies of Virginia-type nuts for 1937-38 do not appear excessive.

In the southeastern States where both Runner and Spanish-type nuts are grown, production in 1937, according to September estimates, will be about 7 percent below the record 1936 crop, but about 65 percent above the 1928-32 average. Stocks of old-crop peanuts in these southeastern States and in consuming markets are larger than a year earlier but total supplies are expected to be somewhat less than in the 1936-37 season. It is expected that a considerable quantity of peanuts, especially Runners, will be crushed as a result of the diversion program. Demand for peanuts for crushing should materially strengthen the marketing situation for the 1937 crop.

In the southwestern States where Spanish-type peanuts are grown, acreage in 1937, according to September estimates, was about 16 percent less than in 1936 and the smallest since 1931. The indicated 1937 yield is, however, higher than the low 1936 yield and the indicated production is about 8 percent higher than in 1936 and about 6 percent above the 1928-32 average. Stocks of old-crop peanuts in the Southwest were depleted at the beginning of the current marketing season, and supplies of peanuts in this area are not likely to prove excessive.



Peanuts: Acreage harvested for nuts, production, quantity crushed for oil and average prices for farmers stock peanuts, crude peanut oil, and peanut meal for designated years

Year	: Acres : harvested	: Production	: Peanuts : Farm : crushed : price : <u>1/</u> : per : pound 2/	: Price per: : pound of : : crude : : oil 3/	: Price per: : ton of : : peanut : : meal 4/
	: 1,000	: 1,000	: 1,000	:	:
	: acres	: pounds	: pounds	:	:
Average 1928-32	: 1,417	: 946,231	: 72,667	: 3.2	: 6.4 : 29.57
1932	: 1,707	: 1,041,150	: 65,428	: 1.5	: 4.1 : 18.60
1933	: 1,468	: 967,620	: 45,000	: 2.8	: 4.8 : 27.13
1934	: 1,699	: 1,123,040	: 220,280	: 3.3	: 9.3 : 29.28
1935	: 1,725	: 1,302,805	: 240,223	: 3.1	: 9.0 : 22.76
1936	: 1,736	: 1,300,540	: <u>5/</u> 295,612	: 3.4	: 9.2 : 36.19
1937	: <u>5/</u> 1,666	: <u>5/</u> 1,270,150	:	: <u>6/</u> 3.4	: <u>7/</u> 6.4 : <u>7/</u> 28.00

- 1/ In terms of peanuts in the shell for the year October 1 - September 30.  
2/ Seasonal average price for farmers stock peanuts.  
3/ Average f.o.b. price at southeastern mills for year October 1 - September 30.  
4/ Average f.o.b. price at southeastern mills for peanut meal of 45 percent protein for year September 1 - August 31.  
5/ Preliminary estimates.  
6/ Estimated price September 15, 1937.  
7/ Estimated prices October 1, 1937.

Peanuts: Acreage and production distributed to the different producing regions for designated years

Year	Producing Section					
	Virginia, North Carolina 1/		Southeastern States 2/		Southwestern States 3/	
	: Acreage	: Production	: Acreage	: Production	: Acreage	: Production
	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000
	: acres	: pounds	: acres	: pounds	: acres	: pounds
Average 1928-32	: 388	: 382,199	: 776	: 435,672	: 253	: 128,360
1932	: 408	: 388,090	: 1,003	: 498,185	: 296	: 154,875
1933	: 320	: 301,400	: 859	: 493,640	: 289	: 172,580
1934	: 394	: 419,350	: 977	: 597,490	: 328	: 106,200
1935	: 383	: 419,975	: 989	: 686,450	: 353	: 196,380
1936	: 381	: 400,785	: 1,044	: 773,615	: 311	: 126,140
1937 <u>4/</u>	: 396	: 414,925	: 1,008	: 719,525	: 262	: 135,700

- 1/ Includes Virginia, North Carolina, and Tennessee.  
2/ Includes South Carolina, Georgia, Florida, Alabama, and Mississippi.  
3/ Includes Texas, Oklahoma, Arkansas, and Louisiana.  
4/ Preliminary estimates.



# THE RICE OUTLOOK FOR 1938

## Summary

Supplies of United States rice for 1937-38 exceed those for any other year for which records are available. Supplies of southern rice are the largest on record and are about 2,500,000 barrels in excess of the 1936-37 utilization. Supplies in California also exceed those of any other year as the result of a record crop and a fairly large carry-over despite special marketing programs designed to increase domestic utilization and exports.

Some increase in utilization is expected during the 1937-38 season, according to the outlook of the Bureau of Agricultural Economics. Domestic consumption may show further slight gains influenced principally by lower rice prices and takings by insular possessions may be somewhat above those of 1936-37, if water shipments are not restricted by labor difficulties. Indications are that exports will exceed those of last season under the inducement of preferential Cuban duties on American rice, some relaxation in trade restrictions in other importing countries, and firmer markets on southeastern Asiatic rices, as the result of smaller supplies and the disturbed political situation in the Orient.

It is unlikely, however, that exports and domestic utilization will expand enough to offset the increase in supplies, and burdensome carry-over stocks at the close of the season are again in prospect.

## Rice Acreage Largest Since 1927

Rice from more than a million acres was harvested in the United States in 1937. This was the largest acreage since 1927 and was 115,000 acres over the average of the preceding 9 years, 1928-37 (table 1). From 1930 to 1934 the acreage planted to rice in the United States declined gradually, but since 1934 the trend of plantings has been upward. There are as yet no indications as to the rice acreage to be planted in 1938 but in the past low prices have usually resulted in some reduction in acreage the following season.

Table 1.-Rice acreage, United States, Southern States, and California, 1924-37

Year	Acreage harvested						U. S. (4 States)
	Ark.	La.	Tex.	Southern States	Calif.		
	acres	acres	acres	acres	acres		acres
1924	1,000	1,000	1,000	1,000	1,000		1,000
1925	166	430	151	747	90		837
1926	176	414	156	746	103		849
1927	196	492	169	857	149		1,006
1928	179	520	165	864	160		1,024
1929	173	495	162	830	132		962
1930	156	465	144	765	95		860
1931	173	491	192	856	110		966
1932	177	458	205	840	125		965
1933	163	415	186	764	110		874
1934	147	395	148	690	103		798
1935	141	415	148	704	108		812
1936	138	412	167	717	99		816
1937	150	445	200	795	140		935
1937	160	445	244	849	154		1,003



Supplies of rice in California are slightly in excess of last season's large stocks, largely as a result of the record 1937 harvest (table 2). Stocks of old rough rice carried over were fairly large despite special marketing programs which increased exports and enlarged domestic utilization of brewers rice. Large stocks of milled rice also were carried over at the close of the season, so that supplies of rough and milled totaled the equivalent of 4,926,200 bags of rough rice at the beginning of the 1937-38 season compared with 4,844,800 bags a year earlier.

Table 2.-Seasonal rice supplies, including carry-over and crop

:	:	:	:	Milled	:	Total	:	:	Total
:	On farms	:	:	rice	:	rough	:	:	supply in
Year:	and in	:	At	:	stored	:	and	:	Crop
:	country	:	mills	:	Total	:	at	:	milled
:	warehouses:	:	:	:	mills 1/	:	1/	:	rough
<u>Southern States (year beginning Aug. 1)</u>									
:	Barrels	Barrels	Barrels	Barrels	Barrels	Barrels	Barrels	Barrels	Barrels
:	<u>162 lbs.</u>	<u>162 lbs.</u>	<u>162 lbs.</u>	<u>162 lbs.</u>	<u>162 lbs.</u>	<u>162 lbs.</u>	<u>162 lbs.</u>	<u>162 lbs.</u>	<u>162 lbs.</u>
1932:	300,681	336,777	637,468	975,930	1,613,398	9,394,140	11,007,538		
1933:	141,750	305,809	447,559	645,539	1,093,098	8,538,587	9,631,685		
1934:	201,700	267,389	469,089	999,298	1,466,387	8,553,032	10,021,419		
1935:	39,583	51,384	90,967	331,816	422,783	8,883,333	9,306,116		
1936:	143,766	71,369	215,135	271,010	486,145	10,356,944	10,843,089		
:	:	:	:	:	:	2/	2/		
1937:	157,900	199,354	357,254	1,071,726	1,428,980	11,598,611	13,027,591		
:	:	:	:	:	:	:	:		
<u>Calif. (year beginning Oct. 1)</u>									
:	Bags 100	Bags 100	Bags 100	Bags 100	Bags 100	Bags 100	Bags 100	Bags 100	Bags 100
:	<u>pounds</u>	<u>pounds</u>	<u>pounds</u>	<u>pounds 3/</u>	<u>pounds</u>	<u>pounds</u>	<u>pounds</u>	<u>pounds</u>	<u>pounds</u>
1933:	163,136	36,864	200,000	114,686	314,686	3,110,400	3,425,086		
1934:	negligible	30,082	30,082	433,802	463,884	3,715,200	4,179,084		
1935:	4,450	5,268	9,718	182,974	192,692	3,029,400	3,222,092		
1936:	415,033	107,656	522,686	25,544	548,230	4,296,600	4,844,830		
:	:	:	:	:	:	2/			
1937:	200,051	20,885	220,936	62,164	283,100	4,643,100	4,926,200		

1/ Milled rice converted to rough on the basis that 1 pocket equals 1 barrel for southern rice and 1 bag milled equals 200 pounds rough for California.  
California milled rice refers only to head rice. 2/ Preliminary October 1 estimate. 3/ Head rice only.

Present indications are that world production of rice in 1937 will be fully as large as a year ago. Although stocks of old rice are slightly less, world supplies for the 1937-38 crop year will be approximately the same as for the preceding season. The demand for rice by the importing countries during 1937-38 is expected to be somewhat larger than in 1936-37.

Rice production in most of the large Asiatic producing countries is expected to equal or be slightly larger than a year ago. In China and Japan weather conditions have been favorable for the rice crops and production will probably exceed the good harvests of 1936. Reports on rice production in India, including Burma, indicate a crop fully as large as a year ago. The Netherland East Indies have harvested another large crop, about the same quantity as last year. The rice crop in Indo China is expected to be somewhat smaller this year as compared with the 1936 harvest. Rice production will probably be about the same as last season in Italy, where weather conditions have been favorable for the crop, although acreage was officially reported slightly below last year. Brazilian rice production in 1937 was reported slightly larger than the 1936 harvest.

Stocks of rice in the principal exporting countries of southeastern Asia are somewhat below those of a year ago. Only Indo China has larger stocks than last year. Stocks of old rice in Italy are very low, whereas in Brazil the surplus available for export is above that of last season.

#### Expansion in Exports and Domestic Disappearance Probable

A further increase in utilization of American rice during the 1937-38 season appears probable. Domestic consumption may show further slight gains as a result of increased consumer income and lower prices of rice. Shipments to insular possessions are likely to be somewhat larger than last season if transportation difficulties do not again restrict movement. Indications are that exports will probably exceed last year's small shipments as a result of preferential Cuban duties on American rice, some relaxation in trade restrictions in other importing countries, and firmer Oriental markets as a result of shorter supplies and the disturbed political situation in the Orient. Marketing programs such as were adopted by the California industry toward the close of the 1936-37 season, if reinstated, will be a factor in determining total exports during the 1937-38 season.

Domestic disappearance of milled rice in the United States during the 1936-37 season totaled approximately 7,546,000 bags or pockets (100 pounds) compared with 6,448,000 bags in 1935-36 (table 3). Disappearance of southern rice increased more than that of California rice with a total of 7,174,863 bags in 1936-37 against 6,124,464 bags the previous season. Domestic utilization of California rice amounted to 370,799 bags against 323,214 bags during 1935-36.

Shipments to insular possessions were slightly under last season, with a total of 2,924,000 bags compared with 2,934,000 bags during the 1935-36 season. Exports to foreign countries gained sharply toward the close of the season as a result of preferential Cuban duties and the inauguration of an export plan by the California industry. The increase more than offset the small exports early in the season and the total of 832,715 bags was above the previous year's exports of 752,246 bags or pockets.

Taking carry-over stocks of rough and milled rice into account, supplies of rice for the 1937-38 season are the largest on record. Supplies of southern rice, including crop and carry-over in terms of rough rice are equivalent to 13,027,591 barrels (162 pounds) which is about 2,500,000 barrels above the 1936-37 utilization for all purposes. Supplies in California rice totaled 4,926,200 bags (100 pounds) if current estimates of production are realized and are about 365,000 bags in excess of the 1936-37 utilization.

Table 3.- Supply and distribution of milled rice

Crop year	: Mill stocks	: Production :	: Total supply	: Exports	: Shipments to possessions	: Disappearance in the U.S.	: Stocks carried over
	: 100	: 100	: 100	: 100	: 100	: 100	: 100
	: pounds	: pounds	: pounds	: pounds	: pounds	: pounds	: pounds
Southern States (year beginning Aug. 1)							
1930-31	: 396,568	10,375,470	10,772,038	2,123,686	1,655,710	6,321,428	671,214
1931-32	: 671,214	9,946,504	10,617,718	2,166,597	1,563,860	5,911,331	975,930
1932-33	: 975,930	9,502,563	10,478,493	1,234,208	1,827,280	6,771,446	645,559
1933-34	: 645,539	8,081,052	8,726,591	842,613	1,530,470	5,354,210	999,298
1934-35	: 999,298	8,658,264	9,657,562	1,141,811	1,776,726	6,407,209	331,816
1935-36	: 331,816	8,496,138	8,827,954	744,821	1,687,659	6,124,464	271,010
1936-37	: 271,010	10,585,800	10,856,810	616,315	1,993,906	7,174,863	1,071,726
Calif. (year beginning Oct. 1)							
1933-34	: 73,374	1,831,070	1,904,444	10,963	1,225,166	440,146	228,169
1934-35	: 228,169	1,728,059	1,956,228	29,944	1,348,697	482,736	94,851
1935-36	: 94,851	1,526,422	1,621,273	7,425	1,246,671	323,214	43,963
1936-37 1/	43,963	1,612,163	1,656,126	216,400	930,158	370,799	138,769

1/ Preliminary.

Foreign demand for rice during the 1937-38 season may be somewhat greater than in the preceding crop year. Requirements in the far eastern countries now engaged in hostilities may be somewhat larger than a year ago in spite of the favorable harvests in that area. Import requirements for some European countries are expected to be slightly greater this season as a result of the smaller grain harvest.

Foreign takings of United States rice have declined sharply during recent years, amounting to less than 65,000,000 pounds in 1936-37 compared with 76,000,000 in 1935-36 and 320,000,000 in 1928-29. Although European countries have reduced total takings of United States rice from an average of 150,000,000 pounds annually in the 5-year period, 1927-28 to 1931-32, to an average of 45,000,000 pounds in 1933-34 to 1936-37, they have increased the imports of rice from other countries, such as Brazil, Italy, and the southeastern Asiatic countries. Cuba has furnished the principal foreign outlet for United States rice during the last 3 years with exports, August 1936 through July 1937, totaling about 37,730,000 pounds, or approximately 60 percent of the total United States exports for last season.



Prices for Rice

The 1936-37 crop of southern rough rice sold slightly under the prices that were received the previous season, with long grains relatively cheaper than Blue Rose and Early Prolific. Prices of southern milled rice during the 1936-37 season, measured by sales in New Orleans, averaged about 10 percent lower than in 1935-36. With the advent of the 1937 crop, prices made further downward adjustments and prices of Blue Rose at New Orleans during the first 2 months of the new-crop year averaged about 25 percent lower than the corresponding months last season. Prices of long grains declined less than prices for Blue Rose and Early Prolific.

Prices of California-Japan at San Francisco averaged about 50 cents per 100 pounds lower during the 1936-37 marketing season than during the previous year. Late in the season special price concessions were made on rice for export in order to dispose of surplus stocks before the 1937 harvest. These special prices on foreign sales tended to obscure price trends. Prices of milled rice for the 1937 crop have been established at levels about 25 percent below those in effect last season.

Table 4.- Average price per 100 pounds, extra fancy grades of milled rice, 1931-32 to 1936-37

Variety and market	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1936-37: 1/	1937-38: 1/
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
New Orleans	:	:	:	:	:	:	:	:
Blue Rose	: 2.79	2.35	3.91	3.85	4.39	4.05	4.53	3.53
Early Prolific	: 2.54	2.16	3.69	3.66	4.17	3.73	4.33	3.27
Lady Wright	: 3.44	2.40	4.00	4.26	4.42	4.01	4.44	---
Edith	: 4.29	2.92	4.54	5.20	4.87	4.16	4.50	3.93
Fortuna	: 4.47	3.02	4.32	5.43	5.08	4.17	4.55	3.93
Rexoro	: ---	---	5.08	5.34	5.35	4.43	5.05	4.31
San Francisco	:	:	:	:	:	:	:	:
Calif.-	:	:	:	:	:	:	:	:
Japan	: 2.63	2.69	3.84	3.99	4.53	4.07	4.61	4.20

1/ August-September only.



## THE DRY BEAN OUTLOOK FOR 1938

### Summary

The 1937-38 supply of beans is indicated to be considerably larger than last year and the 5-year average, owing to an increased acreage and relatively high yields per acre. As a result of this large supply, prices have declined sharply during recent months and probably will average much lower than in the 1936-37 season but somewhat above those of 2 seasons ago.

Because of the lower prices being received for the 1937-38 crop, the Bureau of Agricultural Economics states that it is probable that the acreage planted to beans in 1938, particularly Pea beans, Great Northern, Baby Lima, and Blackeye, will be reduced materially. A total United States harvested acreage in 1938 about the same as that available for harvest in 1937, with average yields, would produce approximately 12 million bags (100 pounds) - a crop about equal to the average of the last 5 years, excluding the large crops of 1935 and 1937. Such a crop, together with a probable carry-over from the 1937-38 season somewhat greater than average would provide a sufficient supply of beans to equal average disappearance.

### General Situation

The indicated production of dry edible beans on October 1, 1937 was 14,340,000 bags. With a carry-over estimated at about 850,000 bags the total domestic supply available for use during the 1937-38 marketing season is about 15,200,000 bags or 24 percent larger than that of a year ago, and 14 percent larger than the 5-year average. The increase in supply this season is due largely to a sharp increase in the acreage available for harvest and to relatively high yields per acre. The supply available this year exceeds normal domestic requirements by about 3 million bags. Owing to the small supply of domestic beans available in the 1936-37 season and the resulting high prices maintained throughout the marketing season, imports totaled 587,000 bags. This season it is expected that imports will be relatively small and that the total requirements will be supplied by the domestic crop. There is no dependable measure of the actual consumption of beans in this country other than the long-time annual supply and disappearance which indicates the utilization of about 12 million bags annually. However, some upward trend in utilization is indicated by the data for recent years.

In the past, whenever the price of beans was low in relation to the general price level of other farm crops as it is this fall, growers tended to decrease bean acreages from 10 to 20 percent the following year. A decrease in the acreage planted to beans in 1938, therefore, is to be expected and if yields are average, the total crop is likely to be smaller than average disappearance. This is particularly true in view of the fact that the large supply of dry edible beans available for the 1937-38 season is due more to sharply increased yields per acre than to increases in the acreage planted. The total acreage of dry edible beans for harvest in 1937 is 1,794,000 acres or about 15 percent more than was actually harvested in 1936, which was relatively low because of the heavy abandonment in the drought-stricken areas. With average yields the 1937 acreage would have produced about 12 million bags or a sufficient quantity to meet normal domestic requirements. It is obvious, therefore, that the acreage of beans for harvest in 1938 should be



maintained at about the same level as that available for 1937, with due consideration for the normal supply and average yields of the particular types of beans.

The average farm price of beans during the marketing season for the 1936 crop was \$5.46 per 100 pounds, compared with \$2.93, the average for the 1935 crop. Although prices were relatively high throughout the entire marketing season they declined steadily from the season's peak in February to the end of the season. The decline was very sharp during August and September 1937.

Imports of beans for consumption during the crop-marketing season 1936-37 totaled 587,000 bags as compared with 152,000 bags the previous year and 153,000 bags the average for the period 1931-35. Exports to foreign countries during the last season amounted to 26,000 bags as compared with 87,000 in 1935-36. Shipments to non-contiguous United States territory have not changed materially in recent years, ranging from 271,000 to 355,000 bags, and totaled 323,000 bags in 1936-37. In view of the relatively large supply of domestic beans available during the 1937-38 season it is probable that imports will be relatively small and that exports will be increased somewhat. Shipments to non-contiguous United States territory probably will show a slight increase over that of past years.

#### Pea Beans

Carry-over of old-crop Pea beans on September 1, 1937, based largely on trade estimates, was considerably smaller than in 1936 and the smallest in a number of years. On the other hand, the production of Pea beans in 1937 is indicated to be increased sharply, approximately 2 million bags over the relatively short crop of 1936 and about 800,000 bags over the 1923-32 average. However, the total supply of Pea beans for the 1937-38 marketing season does not exceed the average annual disappearance in recent years. Moreover, the carry-over at the beginning of the 1938-39 season probably will be no larger than normal, and therefore, a crop about equal to normal requirements will be needed in 1938. Such a crop would require, with average yields, an acreage only slightly greater than is available for harvest in 1937. But it is probable that, owing to the relatively lower prices being received for Pea beans this season, the acreage planted in 1938 will be decreased slightly from that planted in 1937.

#### Great Northern Beans

Stocks of Great Northern beans in producing sections on September 1, 1937, although somewhat larger than a year earlier, were still relatively small. But production in 1937 is indicated to be about one-fourth larger than in 1936 and 8 percent larger than the average for 1928-32. The total supply for the current marketing season is about 30 percent above that of 1936-37, and about 40 percent above the annual average disappearance of the last 5 years. It is probable, therefore, that the carry-over of Great Northern beans at the beginning of the 1938-39 season will be somewhat larger than normal. As a result of this large supply, prices of Great Northern beans along with those of Pea beans have declined sharply in recent months, and probably will remain at relatively low levels during the whole of the 1937-38 season. These lower prices are likely to result in a sharp decrease in the acreage planted to Great Northern beans in 1938. In view of the large carry-over in prospect, it is probable that an acreage in 1938 about 20 percent smaller than the large 1937 acreage would, with average yields, produce a supply equal to average annual requirements.

### Pinto Beans

The yields in the Pinto-bean-producing States of Colorado and New Mexico in 1937, as indicated by September 1 conditions, are considerably below last year and the average. Although the acreage for harvest in 1937 is 25 percent larger than a year earlier, the smaller yields indicate a total production only slightly larger than in 1936. With about average carry-over, stocks in producing areas at the beginning of the 1937-38 season, total supplies of Pinto beans are about equal to the average of recent years. Moreover, if the disappearance in 1937-38 is about equal to the average of recent years, carry-over stocks at the end of the season probably would be no larger than normal and a crop in 1938 about equal to that indicated for 1937 would be needed. Such a production could be produced, with average yields, on an acreage for harvest about 15 percent less than that of 1937. Although prices being received by growers at the beginning of the 1937-38 season are slightly higher than a year earlier it is not probable that they will average as high for the entire season as in the 1936-37 season.

### Lima Beans

The indicated 1937 production of all Lima beans in California is 2,223,000 bags, compared with 1,995,000 bags in 1936 and an average of 1,497,000 bags for 1928-32. The production of Baby Lima in 1937 is indicated to be a new record high, while that for Standard Lima is the largest since 1926. With a carry-over of Baby Lima totaling 145,000 bags, the second largest on record, the total supply for the 1937-38 marketing season exceeds the record supply available in 1936-37 by about 250,000 bags. Although the consumption of Baby Lima has been increasing sharply in recent years, it is probable that the disappearance in 1937-38 will not increase as sharply as the total supply and, therefore, carry-over stocks at the end of the season probably will be unusually large. The supply situation with regard to Standard Lima is more in line with average disappearance as it exceeds last year's supply by only 100,000 bags. With an allowance for some increase in consumption, it is probable that the carry-over at the end of the 1937-38 marketing season will not be excessive. Prices of both Standard and Baby Lima at the beginning of the 1937-38 marketing season were substantially below those of a year earlier and the prospects are for still further declines as the season progresses. These lower prices are likely to result in fairly sharp reductions in the acreage planted to Baby Lima in 1938, which, in view of the prospective large carry-over at the end of the 1937-38 season, appears to be desirable.

Dry edible beans: Acreage and production, average 1928-32,  
annual 1933-37

State	Average 1928-32	1933	1934	1935	1936	1937
	1,000	1,000	1,000	1,000	1,000	1,000
	acres	acres	acres	acres	acres	acres
Acreage:						
Me., Vt., N.Y., Mich.,						
Wis., Minn. 1/	733	737	803	736	624	667
Nebr., Mont., Idaho,						
Wyo., Oreg. 2/	213	177	151	195	171	219
Kans., Colo., N.Mex.,						
Ariz. 3/	547	540	297	615	420	524
Calif. 4/	314	275	299	339	347	384
Total	1,806	1,729	1,460	1,885	1,562	1,794
	1,000	1,000	1,000	1,000	1,000	1,000
	bags	bags	bags	bags	bags	bags
Production:						
Me., Vt., N.Y., Mich.,						
Wis., Minn. 1/	4,624	5,326	5,494	6,365	3,614	5,745
Nebr., Mont., Idaho,						
Wyo., Oreg. 2/	2,283	2,116	1,729	2,097	1,995	2,389
Kans., Colo., N. Mex.,						
Ariz. 3/	1,930	1,809	479	1,896	1,432	1,376
Calif. 4/	3,348	3,520	3,684	3,965	4,081	4,830
Total	12,181	12,771	11,386	14,323	11,121	14,340

1/ Largely Pea beans, but most important source of supply of Red Kidney, Yelloweyes, and Cranberry.

2/ Largely Great Northern, but Idaho most important source of supply of Small Red.

3/ Largely Pinto.

4/ Miscellaneous varieties - mostly Lima, Baby Lima, Blackeye, Small White, and Pink.



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Dry edible beans: Supply and disposition, average 1928-29 to 1932-33, annual 1933-34 to 1937-38

Item	Average 1928-29 to 1932-33	1933-34	1934-35	1935-36	1936-37	1937-38
	1,000 bags	1,000 bags	1,000 bags	1,000 bags	1,000 bags	1,000 bags
Production .....	12,181	12,771	11,393	14,323	11,122	14,340
Carry-over 1/ .....	1,095	1,250	2,000	1,150	1,120	850
Imports .....	653	158	389	152	587	
Total supply .....	13,929	14,179	13,782	15,625	12,829	
Exports and re-exports 2/..	254	79	55	87	26	
Shipments to noncontiguous U. S. territories .....	286	333	271	355	323	
Carry-over 3/ .....	1,231	2,000	1,150	1,120	850	
Domestic disappearance...	12,158	11,767	12,306	14,063	11,639	

1/ Stocks in warehouses and elevators in main producing sections at beginning of crop marketing season September 1.

2/ Exports and re-exports through 1933-34, and exports alone in subsequent years.

3/ Stocks at end of season.

Dry edible beans: Average price per 100 pounds received by farmers, by months, average 1928-29 to 1932-33, annual 1933-34 to 1937-38

Month	Average 1928-29 to 1932-33	1933-34	1934-35	1935-36	1936-37	1937-38
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Sept. ....	4.98	3.29	3.83	3.08	4.35	3.52
Oct. ....	4.69	2.64	3.83	2.89	4.23	
Nov. ....	4.46	2.85	3.56	2.67	5.30	
Dec. ....	4.37	2.64	3.43	2.44	5.49	
Jan. ....	4.34	2.70	3.51	2.61	5.87	
Feb. ....	4.38	2.82	3.50	2.85	6.43	
Mar. ....	4.29	2.75	3.62	2.86	6.32	
Apr. ....	4.21	2.61	3.63	3.00	6.10	
May ....	4.52	2.61	3.62	3.02	5.85	
June ....	4.43	2.74	3.54	2.96	5.66	
July ....	4.40	2.79	3.41	3.73	5.35	
Aug. ....	4.53	3.19	3.26	4.33	4.46	
Weighted average :	.48	2.79	3.56	2.93	5.46	



## THE CLOVER SEED AND ALFALFA SEED OUTLOOK FOR 1938

### Summary

Good stands were obtained from extensive new sowings of alfalfa and the clovers in the spring of 1937, and the acreage for seed production in 1938 is expected by the Bureau of Agricultural Economics to be larger than that harvested in 1937. Prices of alfalfa, red clover, and alsike clover seed may be expected to be higher than average in 1938, but it is not probable that they will remain at the present high levels after next spring unless damage from winter-killing should prove to be very much greater than usual. Extremely unfavorable weather in the spring or early summer of 1938 would likewise affect considerably the production and the prices of these seeds.

The quantities of alfalfa and red-clover seed to be sold in the spring of 1938 are expected to be smaller than usual because of small stocks and high prices. Alsike clover, of which the supply is a little below normal, and sweet-clover, of which there is a small surplus, will probably be substituted in many sections for the higher-priced red-clover and alfalfa seed. Lespedeza and grass seed, supplies of which are large, also will be used more extensively where practicable in place of alfalfa and red-clover seed.

Imports of these seeds in 1937 were the largest in a number of years, the sweetclover imports having set a record. Current high prices would stimulate a continuation of the large imports next year were it not for the fact that production in Canada was much below average and seedsmen in the United States in 1937 had much difficulty in selling imported alfalfa and red-clover seed of foreign origins other than Canadian.

Current prices for these seeds, except sweetclover, are the highest in 18 years and 25 to 50 percent higher than those of last year. Sweetclover prices are a little lower than in 1936.

### Red-Clover Seed Very Short

Production of red-clover seed in 1937 was the smallest since 1926, and may have been even smaller than the production in that year. The 1937 crop is estimated at 25,000,000 to 35,000,000 pounds, depending largely upon the quantity produced from new (spring of 1937) sowings - a most uncertain source. A large portion of the 1936 sowings, from which normally most of the 1937 production would have been obtained, was killed or was thinned by the drought of 1936. The 1935 and 1936 productions of red-clover seed were approximately 48,500,000 pounds each and the 5-year (1930-34) average was approximately 59,500,000 pounds.

The largest decreases in production in 1937 from that in 1936 occurred in central Illinois, central and northern Indiana, southeastern Wisconsin, Ohio, and northeastern Iowa. On the other hand, increased production was most marked in western Oregon, portions of Minnesota, and southern Idaho.

The carry-over of domestic red-clover seed is practically nil. However, it is believed that approximately 3,000,000 pounds of imported seed were still on hand. During the fiscal year ended June 30, 1937, 13,879,300 pounds were permitted entry under the Federal Seed Act. In addition, approximately 1,250,000 pounds, subject to that act, were held on June 30, 1937. The imports for 1937



were the largest in 11 years.

Growers of red-clover seed were offered \$30.10 per 100 pounds, basis clean seed, on October 12, 1937. This is the highest price growers have received since 1919. It is about 30 percent higher than the 1936 price and about  $2\frac{1}{4}$  times the 1935 and the 5-year (1930-34) average prices for comparable dates.

#### Alsike-Clover Seed Supplies Much Smaller Than Last Year

Production of alsike-clover seed in 1937 may have been the smallest since 1923. It is estimated at 18,000,000 to 20,000,000 pounds, compared with about 28,000,000 pounds in 1936, 21,500,000 in 1935, and 20,300,000 pounds, the 5-year average. The decrease in production from that of 1936 was most marked in northwestern Ohio, northern Indiana, and eastern Wisconsin, and the biggest increases were noted for northeastern Minnesota and southern Idaho.

The carry-over of alsike-clover seed is smaller than usual notwithstanding the relatively large production in 1936 and the increased imports. There was an excellent demand for this seed in the spring of 1937 largely because the price was about one-third less than the price of domestic red clover.

Imports of alsike-clover seed for the fiscal year 1937, amounting to 3,138,700 pounds, were the largest since 1930. As usual, this seed came almost entirely from Canada, where the production in 1936 was above average, whereas in 1937 it was very much below average.

At the end of September 1937 growers received the highest prices since 1919. These prices averaged about \$26.40 per 100 pounds, compared with \$18.35 in 1936, \$14.30 in 1935, and \$13.75, the 5-year average for comparable dates.

#### Sweetclover-Seed Crop Larger

Production of sweetclover seed in 1937, estimated at 52,000,000 to 55,000,000 pounds, was the largest since 1929. It was about one-fourth larger than the production in each of the previous years and than the 5-year average. Compared with the 1936 production, the crop in 1937 was larger in nearly all the important producing districts, the largest increases in yields having been reported for the eastern parts of North and South Dakota.

Carry-over is rather small notwithstanding that the 1936 production was only a little below the average and imports, amounting to 7,430,000 pounds for the fiscal year 1937, were the largest on record.

Prices to growers of sweetclover seed about the middle of October averaged \$7.40 per 100 pounds, compared with \$8.15 in 1936, \$2.90 in 1935, and \$3.85, the 5-year average.

#### Alfalfa Seed of Northern Origins Short

Production of alfalfa seed in 1937 in northern and central producing States was about one-sixth smaller than in 1936. But this decrease was offset in part, if not entirely, from the standpoint of the total production by an increase of nearly 50 percent in the production in the Southwestern States. But the shortage of northern origins cannot be made up by increased supplies of southwestern seed, which is not well adapted for the North. The 1937 production for

Clover and alfalfa seed - 3

the United States is estimated at approximately 50,000,000 pounds, compared with approximately 52,000,000 pounds in 1936, with 60,000,000 pounds in 1935, and nearly 59,000,000 pounds, the 5-year average. The largest decreases in production since 1936 occurred in Ohio, Nebraska, South Dakota, Wyoming, and Michigan. The chief increases were in Texas, New Mexico, southern California, eastern Oregon, southern Idaho, and Arizona.

Carry-over of seed, particularly of northern origins, is very small. Although imports of 3,644,600 pounds during the fiscal year 1937 were the largest in 10 years, they met only in a small way the deficiency in the supplies of northern origins in 1937 because a little more than one-half the imports were of origins not generally adapted for sowing in the Northern States.

Prices to growers on October 5, 1937, which averaged \$24.25 per 100 pounds for common alfalfa seed, were the highest since 1920. They were about 30 percent higher than in 1936 and over twice as high as the 1935 and 5-year (1930-34) average prices.





## THE POTATO OUTLOOK FOR 1938

### Summary

The acreage planted to potatoes in 1938 is expected to be about the same as that planted in 1937 and, if yields should be average, the production of potatoes in the United States in 1938 would total about 365,000,000 bushels, the Bureau of Agricultural Economics reports. Such a crop is about 2 percent below average and is about 9 percent smaller than the relatively large crop indicated for 1937 by conditions on October 1.

It is probable that the total acreage planted in 1938 in the early and intermediate States will be decreased somewhat from that planted in 1937, but these decreases probably will be offset by slight increases in the late States. On the basis of anticipated demand conditions, a crop of 365,000,000 bushels in 1938 would result in prices and incomes to growers somewhat higher than what probably will be received for the large 1937 crop and with the exception of 1936, substantially higher than growers have received in other recent years.

This outlook for potatoes is based upon the situation and indications prevailing in October 1937. It does not take into account the effect which the proposed marketing agreements or a possible adjustment program may have on potato acreage and prices in 1938.

### Indicated Production in 1937

Because of the highest yield per acre on record and a 5-percent increase in the acreage for harvest, production of potatoes in 1937 is indicated (on October 1) to be 399,000,000 bushels, or 69,000,000 bushels more than was produced in 1936 and 27,000,000 bushels more than the 1928-32 average crop. Based upon October 1 indications, the crop in the late States is about 17 percent larger than that of 1936, with the greatest increase occurring in the 5 central surplus late States, where the 1936 crop was reduced materially by drought. In these 5 States the 1937 crop is indicated to be about 39 percent greater than that of 1936 but about equal to the average. In the 10 western States, the crop is indicated to be 13 percent larger than that of 1936, whereas in the 8 eastern late States it is only 8 percent larger. In the 12 other late States production is 7 percent larger than the production of 1936. In the 7 intermediate States, the total crop is reported as being 41 percent larger than that of 1936, and in the 11 early States about 44 percent larger.

The larger supply of potatoes available this season, beginning with the early crop, has forced potato prices to much lower levels than prevailed during the comparable periods last season. On September 15, 1937, the United States farm price of potatoes averaged about 54 cents per bushel, compared with \$1.14 a year earlier, 48 cents 2 years earlier, and 61 cents 3 years earlier. When the supply of late potatoes is as large as it is this (1937) season, farm prices usually reach a seasonal low point in October and remain at about that level during most of the remainder of the season.

### Probable Production in 1938 Slightly Below Average

On the basis of an analysis of the relationship existing between annual changes in the United States potato acreage and prices the preceding year and

the second year preceding, the acreage planted to potatoes in 1938 probably will be about the same as that planted in 1937. The influence of the lower prices being received for the 1937 crop is expected to be about offset by the influence of the relatively high prices received for the 1936 crops. The acreage planted to potatoes in 1938 in the early and intermediate States probably will be decreased somewhat from that planted in 1937, but these decreases probably will be offset by a slight increase in the late States.

If average growing conditions prevail in 1938, the indicated planted acreage for 1938 would produce a United States potato crop of about 365,000,000 bushels. This would be about 7,000,000 bushels or 2 percent less than an average crop but nearly 34,000,000 bushels or 9 percent less than the indicated 1937 crop.

Based upon the assumption that demand conditions hold to about the present level during the 1938-39 marketing season, a United States crop of 365,000,000 bushels would probably cause potato prices to rise somewhat above those prevailing for the current (1937) crop and would result in considerably larger incomes to producers of potatoes. Both prices and incomes probably would be higher than for any recent season except the 1936-37 season.

Although the demand for potatoes is relatively inelastic (that is, small crops usually result in larger total returns to growers than do large crops), it appears that over a long-time period potato growers would benefit, under the present demand conditions, if they held their acreage close to the average of recent years, or 3,300,000 acres. This acreage, with yields varying from 100 to 120 bushels per acre, and averaging about 113 bushels per acre, would produce an ample supply of potatoes for all domestic requirements and would return growers a fairly high level of total income. Under these conditions, the total United States production would vary between 330,000,000 bushels in years of low yields and 426,000,000 bushels in years of bumper yields, and would average over a period of years around 373,000,000 bushels. This average production would result in prices to growers that would tend to stabilize acreage at around 3,300,000 acres.

It follows therefore, that if the potato acreage planted in the next few years was maintained at a level only slightly above that planted in 1937 and expected to be planted in 1938 it would produce (on the average) enough potatoes for all domestic requirements.

#### Outlook by Regions

A study of the influences causing growers in the southern early States to vary the acreage planted to potatoes from year to year indicates that the acreage planted in 1938 probably will be decreased about 11 percent from the relatively large acreage planted in 1937. Prices received for the 1937 commercial early crop were relatively low, except in Florida and Texas, and the prospects are that the early 1938 crop will meet severe competition from a relatively large supply of late stored potatoes. These two unfavorable factors are likely to cause growers in the early States as a group to decrease their plantings for the 1938 harvest. It is probable, however, that the commercial early acreage in Florida, Texas, and California will be increased somewhat, as returns to growers in these areas from the 1937 crop were relatively favorable. Early October reports from growers in the early States indicate that plantings for the early commercial crop in Florida and Texas will be increased over the acreage harvested in 1937. The relatively small fall acreage in Texas is expected to be increased by 76 percent and the early acreage in Florida and the lower valley of Texas combined is up by 4 percent. In all of the other early groups, the acreage is expected to be decreased, according to the intention reports. The acreage intended in the second section of early States



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as a whole is reported to be decreased 10 percent from the 1937 harvested acreage, while the acreage in the second-early group of States is down 18 percent. The early acreage in California, which is included with the second section of early States, is intended to be increased about 5 percent.

On the basis of these acreage indications, and if yields are about average, a crop of early potatoes in 1938 smaller than that harvested in 1937 is in prospect. It is probable that the fall and winter supply of new potatoes, however, will be slightly larger; but the spring and early summer supply will be smaller than in 1937.

In the intermediate States, the total acreage planted to potatoes in 1938 is likely to be decreased moderately--about 6 percent--from that planted in 1937. The commercial acreage planted in these States as a group is expected to be decreased by about 11 percent, the first section showing a decrease of 13 percent and the second section a decrease of 6 percent, according to the early October intention reports. These decreased plantings, if yields should be about equal to the average of recent years, would indicate a smaller production of potatoes in the intermediate States in 1938 than was harvested in 1937. The commercial portion of this crop is usually marketed in the latter part of June, and in July, August, and September.

The relatively low prices being received for the late 1937 crop of potatoes will have a tendency to cause growers in the late northern States to decrease plantings in 1938, but counteracting this tendency are the relatively high prices received for the 1936 crop. It is probable, therefore, that the acreage planted to late potatoes in 1938 will be increased slightly. The increase in these States is expected to just about offset the decreases that are likely to occur in the early and intermediate States.

Potatoes: Season average price per bushel received by producers, average 1928-32, and annual 1934-37

Group	Av. 1928-32:	1934	1935	1936	1937 1/
FARM PRICE per bushel:	Dollars	Dollars	Dollars	Dollars	Dollars
Early:					
Total .....	1.02	.68	.69	1.47	
Commercial .....	1.03	.66	.70	1.46	.80
Other .....	1.01	.70	.69	1.48	.83
Intermediate:					
Total .....	.80	.55	.54	1.19	
Commercial .....	.72	.46	.40	1.20	.52
Other .....	.91	.69	.69	1.18	.60
18 Surplus late States...	.63	.38	.58	1.08	.46
12 Other late States ...	.89	.65	.69	1.24	.76
30 Late States combined..	.66	.41	.59	1.10	.50
37 Late & Intermediate...	.68	.42	.59	1.11	.51
United States average..	.71	.45	.60	1.14	.54

1/ Sept.15 averages except commercial early and intermediates which are season averages.

11 Early States		7 Intermediate States		18 Surplus Late States			12 Other Late
				Eastern	Central	Western	
N. Carolina	New Jersey			Maine	Mich.	Nebr.	New Hampshire
S. Carolina	Delaware			New York	Wisc.	Mont.	Vermont
Georgia	Maryland			Pa.	Minn.	Idaho	Massachusetts
Florida	Virginia				N.Dak.	Wyo.	Rhode Island
Tennessee	Kentucky				S.Dak.	Colo.	Connecticut
Alabama	Missouri					Utah	West Virginia
Mississippi	Kansas					Nev.	Ohio
Arkansas						Wash.	Indiana
Louisiana						Oreg.	Illinois
Oklahoma						Calif.	Iowa
Texas							New Mexico
							Arizona



Potatoes - 4

Potatoes: Acreage and production, average 1928-32, annual 1934-37

Item	Average 1928-32	1934	1935	1936	Indicated 1937 1/
	1,000	1,000	1,000	1,000	1,000
	<u>acres</u>	<u>acres</u>	<u>acres</u>	<u>acres</u>	<u>acres</u>
<b>Acreage:</b>					
<b>Early:</b>					
Total .....	390.0	431.0	417.0	390.0	440.0
Commercial .....	158.8	158.6	136.2	136.3	182.6
Other .....	231.2	272.4	280.8	253.7	257.4
<b>Intermediate:</b>					
Total .....	340.0	333.0	322.0	302.0	320.0
Commercial .....	143.4	141.2	121.2	118.0	128.7
Other .....	196.6	191.8	200.8	184.0	191.3
<b>18 Surplus late States:</b>					
Total .....	2,196.0	2,355.0	2,305.0	1,967.0	2,065.4
3 Eastern .....	620.0	666.0	637.0	579.0	611.0
5 Central .....	1,055.0	1,156.0	1,136.0	907.0	930.0
10 Western .....	521.0	533.0	532.0	481.1	524.4
<b>12 Other late States:</b>					
Total .....	401.0	478.0	497.0	399.1	398.5
30 Late States combined ..	2,597.0	2,802.0	2,802.0	2,366.2	2,463.9
<b>37 Late and intermediate</b>					
States .....	2,937.0	3,166.0	3,124.0	2,668.2	2,783.9
United States total..	3,327.0	3,597.0	3,541.0	3,058.2	3,223.9
	1,000	1,000	1,000	1,000	1,000
	<u>bushels</u>	<u>bushels</u>	<u>bushels</u>	<u>bushels</u>	<u>bushels</u>
<b>Production:</b>					
<b>Early:</b>					
Total .....	32,717	36,651	33,799	26,100	37,476
Commercial .....	16,788	19,274	14,035	13,377	20,370
Other .....	15,929	17,377	19,764	12,723	17,106
<b>Intermediate:</b>					
Total .....	39,212	32,279	34,940	26,187	36,875
Commercial .....	22,540	20,035	18,411	16,518	19,761
Other .....	16,672	12,244	16,529	9,669	17,114
<b>18 Surplus late States:</b>					
Total .....	260,473	291,811	271,020	240,254	284,296
3 Eastern .....	96,673	126,641	91,766	96,668	104,927
5 Central .....	90,081	96,017	96,783	64,670	89,923
10 Western .....	73,719	69,153	82,471	78,916	89,446
<b>12 Other late States:</b>					
Total .....	39,713	45,364	46,621	37,456	40,138
30 Late States combined ..	300,186	337,175	317,641	277,710	324,434
<b>37 Late and intermediate</b>					
States .....	339,398	369,454	352,581	303,397	361,309
United States total..	372,115	406,105	386,380	329,997	398,785

1/ Acreage indications as of July 1; production indications as of October 1.

## THE SWEETPOTATO OUTLOOK FOR 1938

### Summary

Sweetpotato acreage in 1938 is expected to increase about 20 percent above the acreage harvested in 1937. With average yields, this would mean a production of about 88 million bushels, or an increase of about 20 percent above the 1937 production. An increase in production normally tends to depress the price of sweetpotatoes. It is probable therefore that, with a larger prospective crop in 1938, sweetpotato prices will average lower than those received for the 1937 crop.

### The 1937 Crop

Sweetpotato acreage in 1937 was only slightly greater than the acreage harvested in 1936. With ideal weather conditions in most of the heavy producing sections, however, yields have averaged considerably higher than in 1936. This has resulted in an indicated production 17 percent greater than the 1936 crop, and 13 percent larger than the 5-year (1928-32) average.

The farm price of sweetpotatoes on September 15, 1937 averaged 90 cents per bushel compared with \$1.02 per bushel the same date in 1936. Sweetpotato production on October 1, 1937, was indicated to be 17 percent greater than the 1936 production. Since the 1937 Irish potato crop is estimated to be 21 percent larger than the 1936 crop, the prevailing low prices of Irish potatoes will have an adverse effect on prices for sweetpotatoes. Prices to growers for their 1937 sweetpotatoes may average considerably less than growers received for the 1936 crop.

### Regional Outlook

A large part of the total sweetpotato crop is grown in the southern cotton States, and these sweetpotatoes are chiefly used in the localities where produced. This farm acreage has varied with the returns from the previous year's cotton crop; the acreage being reduced after a year of improvement in cotton prices and increased after a year of low cotton prices. With the price of cotton at a very low level, the relationship indicates an increase of about 20 percent in the acreage of sweetpotatoes. With average yields, this would mean a large increase in sweetpotato production in the cotton States. The heavy production in these States has an important effect on the sweetpotato price situation.

About 60 percent of the market supply of sweetpotatoes originates in New Jersey, Delaware, Maryland, Virginia, Kentucky, Tennessee, and Louisiana. Moderately favorable prices in 1937 will probably encourage plantings in 1938 at least equal to the 1937 acreage. In some States, such as Virginia, Maryland, and New Jersey, an expected decrease in plantings of Irish potatoes may result in a small increase in sweetpotato acreage, since both crops are commonly grown on the same farm.

## Sweetpotatoes - 2.

## Sweetpotatoes: Acreage, production, and price, by regions

Group	5-year average : 1928-32 :	1934 :	1935 :	1936 :	1937 <sup>1/</sup>
	Acreage Acres	Acres	Acres	Acres	Acres
Four Central Atlantic States: (N.J., Del., Md., and Va.) .....	66	66	70	68	69
Four Lower Atlantic States: (N.C., S.C., Ga., and Fla.) .....	256	311	315	262	264
Eight South Central States: (Ky., Tenn., Ala., Miss., Ark., La., Okla., and Tex.) .....	414	538	538	451	450
Other States: (Ind., Ill., Ia., Mo., Kans., Cal.) .....	38	43	46	41	43
Total United States .....	771	958	969	822	826
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Four Central Atlantic States: (N.J., Del., Md., and Va.) .....	8,205	7,850	8,481	8,876	<sup>2/</sup> 9,375
Four Lower Atlantic States: (N.C., S.C., Ga., and Fla.) .....	20,676	25,420	27,698	20,270	23,350
Eight South Central States: (Ky., Tenn., Ala., Miss., Ark., La., Okla., and Tex.) .....	33,793	41,093	43,037	31,779	38,283
Other States: (Ind., Ill., Ia., Mo., Kans. and Calif.) .....	3,694	3,119	3,912	3,219	4,070
Total United States .....	66,368	77,482	83,128	64,144	75,050
	Dollars	Dollars	Dollars	Dollars	Dollars
Four Central Atlantic States: (N.J., Del., Md., and Va.) .....	.95	.82	.70	.87	<sup>3/</sup> .69
Four Lower Atlantic States: (N.C., S.C., Ga., and Fla.) .....	.94	.79	.71	.86	.94
Eight South Central States: (Ky., Tenn., Ala., Miss., Ark., La., Okla., and Tex.) .....	.93	.78	.68	.97	.89
Other States: (Ind., Ill., Ia., Mo., Kans., and Calif.) .....	1.19	.97	.93	1.28	1.19
Total United States .....	.94	.80	.70	.94	.90

<sup>1/</sup> July estimate.<sup>2/</sup> October 1 estimate.<sup>3/</sup> September 15 estimate.



## THE 1938 OUTLOOK FOR TRUCK CROPS FOR MARKET

### General Summary

Production of commercial truck crops in 1938 is expected by the Bureau of Agricultural Economics to equal or slightly exceed the record volume of 1937 if yields are about average in 1938. Acreage increases in 1938 are expected for lettuce, onions, and lima beans, with most other commodities holding close to the levels of the 1937 harvested acreage. Some decrease in cabbage acreage is probable in the late Domestic and Danish areas as a reaction to the increased production and low prices of 1937. For the second successive year, a volume record was established in 1937 in the production of commercial truck crops for fresh market shipment. The total tonnage was 3 percent above the previous record made in 1936 and 12 percent above the 5-year (1928-32) average.

There has been a marked expansion of acreage of commercial truck crops for market since 1919. During most of this period, especially from 1921 to 1932, there was a rather sharp downward trend in value per acre. Since 1933 the value per acre has risen slightly. By 1932 there was evidence that many growers of field crops were looking upon vegetable production as holding an inviting prospect for expansion or as a relatively profitable alternative for other cash crops that have paid disappointingly low returns. Before growers shift further from the production of field crops to vegetables they should give careful thought to the higher costs and the greater risks involved in the production and marketing of the perishable crops.

Another record production of commercial vegetable crops is imminent in 1938 and this probably will result in forcing price levels downward since a slight decline is expected in consumer buying power. Because of the large production in 1937 of cabbage, green peas, tomatoes, spinach, and watermelons, part of these crops were left unharvested in some areas, prices being so low that they would not return the marketing costs. One important factor that will tend to reduce the price level of fresh vegetables in 1938 is the carry-over of heavy stocks of canned peas, snap beans, sweet corn, lima beans, and other vegetables into the 1938 marketing season. Further competition will be experienced on account of the increase in "frozen" vegetable supplies in 1937.

Acreage indications for 11 commercial truck crops from which production will move to market during the coming winter and early spring months show a decrease of 6 percent below the preceding year. The total acreage for these early vegetable crops, however, is indicated to be 46 percent above average. Increases for 1938 over the previous year occur in the acreage of carrots, eggplant, and peppers, while decreases are reported in the acreage of artichokes, snap beans, cabbage, cauliflower, celery, cucumbers, spinach, and tomatoes. The growers' intentions report dated October 1, 1937, indicates that the acreage of asparagus for harvest in 1938 has been increased 4 percent. A slight general decrease in acreages of vegetables as reported by the Southern States is expected to be more than offset by increases in the intermediate and late groups of States.

### Vegetable Imports and Exports

Exports and imports of vegetables (fresh, dried, and canned) have tended to increase in the last 2 years but are still substantially below the trade of the pre-depression years. Exports averaged about \$9,400,000 in the last 5 years compared with \$18,500,000 in the 5-year period, 1927-28 to 1931-32. Imports of vegetables averaged around \$12,300,000 in the last 5 years against \$29,100,000 in the previous 5 years. Recovery in the trade in green vegetables has been greater than in the other classes.

The improvement in purchasing power in the United States is the chief reason for the increase in the imports of vegetables, and the improvement in purchasing power in Canada (the largest foreign market) and to a lesser degree in other countries is responsible for the larger exports of vegetables. The increase in the imports of fresh vegetables is also partly explained by the smaller production in Florida in the last 3 seasons compared with the previous 3 seasons.

Although the 283,267,000 pounds of vegetables (fresh, canned, and dried) exported from the United States in 1936-37, July to June, were slightly below the exports of the previous season, the total value of \$12,196,000 was an increase of \$728,000 over the 1935-36 period. Of the total, green vegetables comprised 37 percent, root vegetables 18 percent, canned vegetables 41 percent, and dried vegetables only 4 percent. The shipments of fresh vegetables increased 23 percent in value over the large exports of 1935-36. The value of all fresh vegetable items was greater this last season, with string beans, peas, peppers, and tomatoes in particular showing marked increases.

Practically all of the exports of fresh and root vegetables go to Canada, which is the most important outlet for canned vegetables, but some items such as canned asparagus are widely exported. Exports of fresh vegetables to Canada will probably show some decline during 1937-38 because of lower purchasing power occasioned by the small grain crops in that country. The trend of exports to Canada during the next few years will be influenced by the trend of purchasing power.

The total value and quantity of imports of vegetable products into the United States for 1936-37 were much greater than the imports for the previous season. Imports were valued at \$15,329,000 in 1936-37 compared with \$11,894,000 for the previous season. Fresh vegetables comprised 27 percent of the total, root vegetables 18 percent, dried 22 percent, and canned vegetables 33 percent.

Fresh vegetables, the largest part of which are shipped from Cuba and Mexico, amounted to \$4,093,000 in 1936-37, and was 21 percent greater than the value for the previous season. Imports of tomatoes, which accounted for almost 60 percent of all imports of fresh vegetables, increased \$463,000 over last year. Peas, okra, and cucumbers showed increases in value, whereas beans, eggplant, and peppers dropped considerably below the previous season.



Imports of fresh vegetables from Mexico and Cuba have increased since the low point reached in 1933-34. Some increase in the imports from Mexico will probably occur during the next few seasons providing demand conditions in the United States remain about the same or improve, and provided plantings continue to increase in Mexico. Although there is a large area in Cuba which could be devoted to these crops, reports indicate that the area now planted to winter vegetables in that country is considered to be about as large as can be profitably utilized at present. Consequently, exports probably will not show much increase for the next few years.

Vegetables: United States trade by principal groups,  
1927-28 to 1936-37

Year	Total	Green	Root	Dried	Canned
July -June	vegetables	vegetables	vegetables	vegetables	Vegetables
	:1,000	: 1,000	: 1,000	: 1,000	: 1,000
	:dollars	: dollars	: dollars	: dollars	: dollars
<b>Exports</b>					
1927-28	: 21,255	: 4,750	: 3,943	: 2,191	: 10,371
1928-29	: 23,333	: 5,868	: 3,330	: 1,983	: 12,152
1929-30	: 23,638	: 6,503	: 3,932	: 1,610	: 11,593
1930-31	: 15,375	: 4,745	: 2,186	: 934	: 7,510
1931-32	: 8,725	: 3,071	: 976	: 524	: 4,154
Average	: 18,465	: 4,987	: 2,873	: 1,448	: 9,156
1932-33	: 6,282	: 2,164	: 916	: 430	: 2,772
1933-34	: 7,920	: 2,634	: 1,022	: 453	: 3,806
1934-35	: 8,994	: 3,030	: 1,193	: 402	: 4,369
1935-36	: 11,468	: 3,646	: 2,099	: 465	: 5,258
1936-37	: 12,196	: 4,472	: 2,137	: 538	: 5,042
Average	: 9,372	: 3,189	: 1,473	: 459	: 4,251
<b>Imports</b>					
1927-28	: 30,824	: 3,183	: 6,422	: 11,600	: 9,619
1928-29	: 30,805	: 3,271	: 5,123	: 11,995	: 10,416
1929-30	: 44,360	: 8,477	: 9,338	: 14,946	: 11,559
1930-31	: 23,828	: 6,278	: 5,215	: 5,874	: 6,461
1931-32	: 15,572	: 5,924	: 2,016	: 1,758	: 5,874
Average	: 29,078	: 5,427	: 5,623	: 9,235	: 8,794
1932-33	: 10,076	: 2,931	: 1,021	: 1,487	: 4,637
1933-34	: 12,093	: 2,105	: 2,898	: 1,766	: 5,324
1934-35	: 12,166	: 3,045	: 1,485	: 2,160	: 5,476
1935-36	: 11,894	: 3,384	: 1,852	: 1,677	: 4,981
1936-37	: 15,328	: 4,093	: 2,847	: 3,337	: 5,051
Average	: 12,311	: 3,112	: 2,021	: 2,085	: 5,094

Smaller Exports from Cuba Expected

Plantings of vegetables in Cuba have been practically completed. The total acreage is expected to be less than the 40,900 acres planted last season because of unfavorable weather conditions at planting time. Total exports of tomatoes are tentatively estimated at 1,200,000 lugs against 1,643,000 lugs in 1936-37. Plantings of potatoes exceed the 15,300 acres of last season but this is not an important export crop. It is expected that the acreage in lima beans, eggplant, cucumbers, green peppers, okra, and other vegetables will be about the same as last year.



Cuba: Acreage, production, and estimated export crop of  
the principal winter vegetables, 1935-36 and 1936-37

Season and vegetable	Area	Production		Estimated export crop	
		Total	Per acre	Total	Per acre
	<u>Acres</u>	<u>Lugs</u>	<u>Lugs</u>	<u>Lugs</u>	<u>Lugs</u>
<u>Tomatoes</u>					
1935-36 .....	14,800:	2,072,000	140	1,376,000	93
1936-37 .....	20,800:	2,704,000	130	1,643,000	79
<u>Lima beans</u>					
1935-36 .....	1,750:	315,000	180	156,000	89
1936-37 .....	2,000:	300,000	150	122,000	61
<u>Eggplant</u>	<u>Acres</u>	<u>Bushels</u>	<u>Bushels</u>	<u>Bushels</u>	<u>Bushels</u>
1935-36 .....	1,100:	385,000	350	264,000	240
1936-37 .....	1,200:	396,000	330	264,000	220
<u>Cucumbers</u>					
1935-36 .....	700:	77,000	110	53,000	76
1936-37 .....	700:	87,000	124	57,000	81
<u>Green peppers</u>					
1935-36 .....	800:	280,000	350	192,000	240
1936-37 .....	900:	315,000	350	207,000	230
<u>Potatoes</u>					
1935-36 .....	15,900:	1,828,000	115	<u>1/</u>	<u>1/</u>
1936-37 .....	15,300:	1,836,000	120	<u>1/</u>	<u>1/</u>

1/ Not an important export crop.

Tomato Acreage Increased in Mexico.— It is too early for definite information concerning plantings in the Mexican West Coast vegetable region, but recent reports indicate that plantings of tomatoes will exceed the 14,400 acres planted in 1936 by a wide margin. The area utilized for green peas, peppers, and string beans will probably be smaller than last season.

## THE CABBAGE OUTLOOK FOR 1938

### Summary

Because of low yields and a total production of late domestic and Danish cabbage far below earlier expectations, it is problematical whether total plantings for the 1938 crop of cabbage in the United States will be reduced much below that of 1937. Prices for the 1937 late domestic and Danish crops to be marketed this fall and winter are likely to trend upward from the early season levels and as a result growers in the late States may not reduce their plantings in 1938 below that of 1937. However, with average yields and an acreage as large as that of 1937, production of late cabbage would no doubt result in a crop much in excess of average and would bring relatively low prices.

Growers in the second early States will probably not reduce their acreages since substantially higher prices were received in 1937 for a larger crop than was harvested in 1936 although a 5 percent acreage reduction in 1938 in this group of States with average yields would probably result in a crop that will sell at higher prices than were received in 1937. Growers in the fall and early States have already signified intentions of reducing their plantings for the crop to be marketed this winter about 9 percent, but this prospective reduction in acreage may not materialize because of the substantial reduction in the production of Danish cabbage with which the early crop competes during the winter months.

The commercial acreage of cabbage in the United States both for fresh market shipment and kraut manufacture in 1937 totaled about 191,300 acres which was 4 percent more than in 1936 and 28 percent above the average for 1928-32. All groups of States except the early States increased their plantings over the previous year. Unfavorable growing conditions during the last few weeks in several of the northern States have materially reduced yields of both late domestic and Danish cabbage and the indicated total production of all cabbage for the United States in 1937 is 1,174,000 tons - only 8 percent more than the short crop of 1936. Based on marketings to date the seasonal average price to growers October 1 for the total crop will probably be around \$12.50 per ton as compared with \$20.39 for the 1936 crop.

### Outlook by Regions

The early States (California, Florida, Louisiana, and Texas) reduced their acreage less than 2 percent in 1937 but yields were somewhat lighter except in Florida, and total production was 12 percent less than in 1936. Even though production was considerably less than for the previous year, carlot shipments during January and February from Texas exceeded those of 1936, depressing prices to a low level, and growers in the early States as a whole received the relatively low seasonal average price of \$12.74 per ton. This price was higher by 3 percent, however, than the very low average for the 1936 crop. After experiencing two successive seasons of relatively low prices growers have indicated that they intend to reduce

their plantings 13 percent this fall for the crop to be marketed this winter. Since the 1937 production of late Danish cabbage has fallen far short of earlier estimates and indicates relatively small stored stocks, this intended reduction may not materialize.

A record acreage in 1936 and relatively low prices failed to discourage growers in the second early States (Alabama, Georgia, Mississippi, North Carolina, South Carolina, the Norfolk section and the Eastern Shore of Virginia) from maintaining about the same acreage in 1937. Slightly greater average yields resulted in a total crop approximately 6 percent larger than in 1936. Although prices of cabbage from the early States remained relatively low until after the peak of shipments, they advanced sharply in April and May as the volume of shipments decreased more rapidly than normal. As a result of the reduced competition from the late shipments from the early States growers were able to dispose of their crop at substantially higher prices, and averaged \$24.39 per ton for the season as compared with \$12.33 per ton for a smaller crop in 1936. In view of the higher prices received for the comparatively large 1937 crop growers in the second early States are not likely to reduce their plantings in 1938 although it is doubtful that they could market as large a crop as advantageously as they did in 1937 when there was considerably less than normal competition from the last of the early crop.

High prices in 1936 for about an average crop in the intermediate States (Arkansas, Illinois, Iowa, Kentucky, Maryland, Missouri, New Jersey, New Mexico, the Long Island section of New York, southeastern Ohio, Tennessee, southwestern Virginia, and Washington) was the stimulus for an increase of 6 percent in plantings in 1937. Yields were about average and a total production of 227,000 tons was obtained. This is the largest crop on record and is about 42 percent greater than the production in 1936 and 2 percent larger than the previous record crop in 1935. As a consequence the price to growers dropped to an average of \$14.93 per ton as compared with \$32.23 per ton for the small 1936 crop. Because of the low prices received in 1937, it is probable that growers in these States will reduce their plantings somewhat in 1938. Probably a 5-percent reduction in acreage in this group of States in 1938, with average yields, would result in a crop that would bring higher prices than in 1937.

In the late States (Colorado, Indiana, Michigan, Minnesota, New York, Ohio, Oregon, Pennsylvania, Utah, and Wisconsin) where normally a little less than half of the domestic cabbage crop is used for kraut manufacture, growers received an average of \$24.95 per ton for the small 1936 crop, and increased their plantings 11 percent in 1937. Growing conditions in some of the northern States were extremely unfavorable during the latter part of the 1937 season and yields averaged about 7 tons per acre. As a result a total crop of only 293,500 tons for market and for kraut combined was produced. This is an increase of 16 percent over the small crop in 1936. The farm price to date has averaged about \$9.25 per ton as compared with \$24.95 per ton in 1936 and a 5-year average price of \$9.89 per ton but prices are expected to advance to higher levels during the fall months because of recent unfavorable growing conditions. Unless prices rise materially, growers of domestic-type cabbage are likely to decrease their plantings in 1938. An acreage in 1938 about 5 percent smaller than that planted in 1937, with average yields, would give a production sufficiently lower than that produced in 1937 to insure some improvement in prices.

Growers of Danish type cabbage in the late States (all States except



Oregon and Utah in the list above) received the relatively high average price of \$19.06 per ton for the below-average 1936 crop and increased their plantings 5 percent in 1937. Drought followed by heavy rains, and insect infestation, are responsible for materially reduced yields in several northern States in 1937 and production on October 1 is indicated to be about 267,000 tons or about the same as the small 1936 crop and 4 percent less than the 5-year average. As a consequence of the substantial decrease in production over that expected a few weeks ago prices of Danish cabbage are likely to move upward from the early season level. This may influence growers to plant about the same acreage as in 1937 which with average yields, would probably result in a crop above average and in relatively low prices.

Cabbage for market and kraut: Commercial acreage, production, and season average price received by farmers, by groups of States, average 1928-32, and annual 1934-37

Item and group	Average 1928-32	1934	1935	1936	Preliminary 1937
	: Acres	: Acres	: Acres	: Acres	: Acres
<b>ACREAGE</b>					
Fall	810	1,000	1,400	1,920	2,800
Early	37,560	65,400	26,900	57,100	56,200
Second-early	13,810	23,250	17,100	13,300	18,600
Intermediate	25,220	36,660	36,350	32,510	34,470
Late, domestic	36,560	48,390	44,970	38,690	42,150
Late, Danish	35,190	44,400	40,510	35,340	37,090
Late, total	71,750	92,790	85,480	74,030	79,240
U. S. total	149,150	219,100	167,230	183,860	191,310
For market	128,910	193,390	150,730	165,050	169,310
For kraut	20,240	25,710	16,500	18,810	22,000
	: Sh. tons	: Sh. tons	: Sh. tons	: Sh. tons	: Sh. tons
<b>PRODUCTION</b>					
Fall	5,900	7,600	10,800	9,500	19,500
Early	211,000*	346,000*	131,200	377,300*	269,900
Second-early	80,700*	105,200*	92,700*	92,100*	97,500
Intermediate	157,700*	191,700	222,300*	160,400	227,200
Late, domestic	292,600*	400,300	373,900	252,900	293,500
Late, Danish	279,000*	406,600	289,200	266,900	267,100
Late, total	571,600*	806,900	663,100	519,800	560,600
U. S. total	1,026,900*	1,457,400*	1,120,100*	1,089,100*	1,174,700
For market	861,200*	1,241,700*	985,300*	974,300*	1,041,900
For kraut	165,700	215,700	134,800	114,800	132,800
	: Dollars	: Dollars	: Dollars	: Dollars	: Dollars
<b>FARM PRICE PER TON</b>					
Fall	42.20	30.13	20.19	28.11	14.21
Early	24.65	9.83	26.81	12.36	12.74
Second-early	33.50	8.60	30.13	12.33	24.39
Intermediate	18.85	14.57	13.11	32.23	14.93
Late, domestic	9.89	7.81	6.39	24.95	9.25
Late, Danish	12.09	5.84	8.87	19.06	10.50
Late, total	10.95	6.82	7.47	21.93	9.84
U. S. average	16.34	8.73	12.80	20.39	12.55
For market	18.15	9.19	13.85	21.30	13.37
For kraut	7.53	6.35	5.17	13.03	7.48

\* Includes some quantities not harvested because of market conditions.



## THE CELERY OUTLOOK FOR 1938

An increase in the total acreage planted to celery in 1938 over that planted in 1937 is in prospect. With only average yields, production would be above that of the record year of 1937. On the basis of prospective demand conditions, a larger supply of celery in 1938 probably would force prices to levels lower than those prevailing in 1937.

Total celery acreage in the United States reached a record high in 1937 of 40,770 acres, which was 12 per cent greater than the previous record acreage of 1936 and 25 per cent larger than the average for 1928-32. The average price per crate of celery to growers in 1937 was \$1.51 as compared with \$1.78 in 1936, and \$1.61 for the 1928-32 average.

### Trends in Production, Value and Price

Comparison of trends in acreage, yield, production, value per acre, and price, as shown for representative years in the accompanying tables, between celery and 17 vegetables for fresh market indicates that celery stands in a relatively favorable position. Unlike the yield in the case of most important truck crops, the average celery yield per acre since 1921 has remained comparatively constant, varying between 94.2 per cent of the average for the 1924-29 period in 1936, and 108.8 per cent in 1930, whereas 17 vegetables for fresh market varied in yield from 104.1 per cent of the 1924-29 average in 1921 to 85.8 per cent in 1933. In 1921 the acreage of celery was 64 per cent of the average acreage for the 6-year period, 1924-29. Since then it has risen to 153.3 per cent in 1937. This is relatively less than the increase from 58.5 per cent of the average in 1921 to 153.4 per cent in 1937 for the 17 vegetables.

In contrast with the majority of other annual vegetable crops, analyses indicate that acreage changes are largely caused by other factors than prices received by growers during the previous season. It appears that the relative profitability of celery production over crops competing for land and labor may be the cause of a sharper increase in the last 4 years in celery acreage than in the acreage of the group of 17 important truck crops for fresh market. The increase in acreage from the depression low point to 1937 was 30 per cent in the case of celery, but only 17 per cent in the 17 vegetables.

The value per acre of celery is very high, averaging more than \$400 per acre in recent years. By contrast, the average value per acre of the 17 truck crops ranged under \$120 per acre since 1930. With a much higher base average, the index of value per acre in celery has remained on a consistently higher level than the index for 17 vegetables.



Expansion in Acreage Seen

In forecasting the future acreage of celery in the United States, it is particularly significant that average yields have been relatively stable since 1921 and little downward trend, if any, has been experienced, although acreage has expanded materially. In contrast, there has been a pronounced downward trend in average yield per acre of the 17 vegetables for fresh market.

The upward trend in celery acreage appears to be definite enough so that an extension of the trend line indicates that celery acreage may be expanded by at least 3 to 5 per cent in 1938 to approximately 42,000 to 43,000 acres. According to preliminary reports, celery acreage for harvest during the current fall and winter season will be smaller than that of the corresponding 1937 season.

It should be noted, however, that the demand for celery in terms of grower prices is inelastic. That is, under conditions of demand that are expected to prevail in 1938, a large supply can be expected to result in a lower farm value than a small crop.

## Celery: Acreage, production, and farm price

Seasonal group	Acreage					
	5-Year					Prelim-
	average	1933	1934	1935	1936	inary
	1928-32					1937
	acres	acres	acres	acres	acres	acres
Fall and winter/1	7,180	3,500	5,800	8,190	9,050	10,300
Early/2	7,620	8,830	7,850	7,700	8,900	10,200
Second Early/3	1,000	1,500	1,200	1,300	1,900	1,700
Intermediate/4	3,710	4,380	4,470	4,060	4,090	4,390
Late (1) /5	11,650	11,850	11,690	11,310	10,400	12,000
Late (2) /6	1,460	1,540	1,420	1,830	2,010	2,180
Total all States	32,620	31,600	32,500	34,390	36,350	40,770

	Production					
	1,000	1,000	1,000	1,000	1,000	1,000
	crates/7	crates/7	crates/7	crates/7	crates/7	crates/7
Fall and winter	1,240	693	1,114	1,572	1,538	1,700
Early	2,533	2,621/8	2,501	2,251	2,538	3,153
Second early	597	644	335	577	969	850
Intermediate	1,014	1,040	1,101	950	1,114	1,106
Late (1)	3,348	3,265	3,156	2,532	2,594	3,674
Late (2)	443	419	496	459	623	698
Total all States	9,168	8,702/8	8,697	8,348	9,376	10,581

	Farm price per crate/7					
	dollars	dollars	dollars	dollars	dollars	dollars
Fall and winter	1.18	1.19	1.10	1.60	1.90	1.55
Early	2.33	1.15	1.46	2.50	2.34	2.10
Second early	1.66	1.98	1.93	2.65	2.35	1.40
Intermediate	1.62	1.22	1.45	1.40	1.81	1.80
Late (1)	1.27	1.25	.90	1.27	1.04	.90
Late (2)	1.35	1.32	1.25	1.67	1.26	1.15
Total all States	1.61	1.27	1.22	1.80	1.78	1.51

/1. California.

/2. California, Florida.

/3. California.

/4. Indiana, Michigan, New Jersey, New York, Ohio.

/5. Colorado, Michigan, New York, Ohio, Oregon, Pennsylvania.

/6. Idaho, Indiana, New Jersey, Utah, Washington.

/7. Two-third size (New York) crate containing approximately 20 pounds.

/8. Includes some quantities not harvested because of market conditions.

Indexes of United States celery and 17 vegetables  
for fresh market  
1921-37

(1924-29=100)

Year	Acreage	Yield	Value per acre	Pro- duction	Price	Value
	1	2	3	4	5	6
	<u>percent</u>	<u>percent</u>	<u>percent</u>	<u>percent</u>	<u>percent</u>	<u>percent</u>
<u>Indexes of United States celery</u>						
1921	64.0	103.7	123.0	66.1	118.2	79.3
1924	88.6	96.7	106.0	85.6	109.1	94.6
1927	100.8	104.8	99.0	105.6	94.1	100.3
1930	125.3	108.8	93.0	136.3	85.0	117.6
1933	118.6	101.1	69.0	120.1	67.9	80.9
1936	136.6	94.9	91.0	129.4	95.2	124.3
1937	153.3	95.6	78.0	146.0	80.7	119.3
<u>Indexes of 17 vegetables for fresh market</u>						
1921	58.5	104.1	118.5	60.9	114.0	69.7
1924	83.5	102.8	107.8	85.8	104.5	90.6
1927	102.5	102.5	93.3	105.1	92.1	96.2
1930	131.9	91.9	78.5	121.2	87.1	104.1
1933	130.6	85.8	54.4	112.0	65.2	71.5
1936	152.9	86.2	64.5	131.8	76.7	99.2
1937	153.4	89.4	65.3	137.2	72.4	100.8



## THE OUTLOOK FOR SNAP BEANS FOR MARKET FOR 1938

### Summary

Prices were higher in 1937 than in 1936, and this is expected to stimulate a slight increase in snap bean acreage in 1938. Larger acreages are expected in all the early and intermediate sections, with the exception of the second-early States, where disappointing yields in 1937 are likely to discourage any expansion of acreage. With average yields in 1938, production will probably exceed that of 1937 and result in lower prices to growers.

### The 1937 Crop

For the country as a whole, snap bean production in 1937 was 12 percent greater than in 1936 and 36 percent larger than the 1928-32 average. Acreage, for all producing sections, totaled 171,140 acres in 1937 compared with 164,570 acres in 1936 and the 1928-32 average of 110,600 acres. Yields, although somewhat above last year, were still below average.

Despite a larger production this year, prices to growers were higher than last year. For all marketing groups combined, price per bushel averaged \$1.27 this year compared with \$1.16 in 1936 and the 1928-32 average of \$1.41 per bushel.

### Regional Outlook

Fall States.- Production in the Fall States (Florida and Texas) was 53 percent greater than in 1936 and 96 percent larger than the 1928-32 average. Price per bushel reached the low level of \$1.00 compared with \$1.28 in 1936 and the 1928-32 average price of \$1.99. The low return to growers in 1937 will result in a net decrease in planted acreage in these States. Growers have already indicated this decrease will amount to about 10 percent.

Early States.- Production in the early States as a group (Florida-winter, California, Florida-spring, Texas, Alabama, Georgia, Louisiana, Mississippi, and South Carolina) was estimated to be 8 percent less than in 1936 but still 18 percent greater than the 1928-32 average. Prices for these States as a whole averaged \$1.69 per bushel compared with \$1.39 in 1936 and the 1928-32 average of \$1.70. It is expected the relatively high prices received in 1937 will encourage increased plantings in 1938.

Intermediate States.- In the intermediate States (Arkansas, North Carolina, Tennessee, Virginia, Delaware, Illinois, Maryland, and New Jersey) production was estimated to be 13 percent greater than in 1936 and 10 percent above the 1928-32 average. Despite this relatively large crop, prices to growers in 1937, for this group of States as a whole, averaged 98 cents per bushel compared with \$1.00 in 1936 and the 1928-32 average of 96 cents per bushel. In view of the favorable outturn of the 1937 crop, acreage planted to snap beans in these States is expected to increase slightly.

Late States.— Production in the late States (Colorado, Michigan, New York, Pennsylvania, California, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, South Carolina, and Virginia) is estimated to be 35 percent greater than 1936 and 79 percent larger than the 1928-32 average. Price per bushel averaged 96 cents in 1937 compared with 92 cents in 1936 and the 1928-32 average of \$1.01. This favorable situation is expected to result in a considerable expansion in acreage in the late States as a whole.

## Snap Beans for Market

Year	Acreage	Yield	Production	Price
		per acre		Per bushel
	Acres	Bushels	1,000 bushels	Dollars
1928	97,320	76	7,416	1.75
1929	97,590	91	8,868	1.63
1930	111,840	93	10,375	1.40
1931	118,150	84	9,911	1.30
1932	128,120	94	12,059	.97
1933	133,110	87	11,563	.92
1934	172,630	88	15,202	.84
1935	166,760	78	12,979	1.02
1936	164,570	72	11,843	1.16
1937	171,140	77	13,258	1.27

## THE TOMATO OUTLOOK FOR 1938

### Summary

The prospects are for a slight increase in 1938 in plantings and production of tomatoes for the fresh market. A decline in the acreage planted is expected in some areas where prices in 1937 were lower than in 1936, but the decline probably will be offset by increased plantings in other areas. The acreage planted in 1938 probably will be reduced below that harvested in 1937 in the intermediate and the first section of late states, and probably will be maintained or increased in the fall and early groups, and in the southern district of California.

Following relatively high prices for tomatoes in 1936, growers planted a record high acreage in 1937. It was 6 percent larger than in 1936, and 29 percent larger than the 5-year (1928-32) average. A record crop was produced; it exceeded the large 1936 crop by 4 percent, and the 1928-32 average by 23 percent. Preliminary estimates indicate prices for all areas combined, will average \$1.06 per bushel, compared with \$1.34 per bushel in 1936.

The increase in total production in 1937 over that in 1936 resulted from increases in the first section of early states, the intermediate, and first section of late states. A combination of weather factors reduced production in the fall and early groups. The greatest reduction occurred in the second section of early states following severe losses from excessive rain in the Florida area in April. Prices received by growers of tomatoes in 1937 were higher than in 1936 in the second section of early states and the second early group, and were lower in the other groups with the exception of the southern district of California where prices for the crop to be marketed this fall are expected to be higher than in 1936.

### Outlook by Regions

#### Fall and early States

Lower prices in 1937 for the fall crop of tomatoes in Florida and Texas may result in a leveling off in the fall and winter of 1937-38 of the recent upward trend in acreage in these areas. Relatively favorable prices for the crop marketed in the fall and winter of 1935-36 resulted in a 47-percent increase in acreage for the fall and winter of 1936-37. In spite of sharply increased acreage, production was 18 percent less than in the previous season. Although production was reduced, prices were lower than in the preceding season as a result of the low quality of the crop. Recent reports indicate that the supply of tomatoes for export from Cuba in 1937-38 probably will be about one-fourth smaller than in the previous season. On the other hand, plantings in Mexico are reported to be somewhat larger than a year ago.

Although somewhat lower prices were received for the spring crop of tomatoes in South Florida in 1937, it is not expected that there will be a reduction in the acreage planted to tomatoes in 1938. High prices for the 1936 crop in this area resulted in an increase of 56 percent in acreage and a 36-percent increase in production in this area in 1937. As a result of the increased production, prices to growers declined to \$3.20 per bushel from \$3.50 per bushel in 1936. This price of \$3.20 per bushel, however, is higher than in other recent years and is about 11 percent above the 5-year (1928-32) average.



2 - tomatoes

In Florida, "other", the Lower Valley of Texas, and the Imperial Valley of California, prices received by growers for the 1937 crop averaged higher than for the preceding year. This fact will probably mean an increase in acreage in 1937 for the group. The acreage of spring-grown tomatoes in these areas was 22 percent less and production was 15 percent lower than in 1936.

#### Second early States

Prices received by growers of tomatoes in the second early states (Georgia, Louisiana, Mississippi, South Carolina, and other Texas), were substantially higher in the 1937 season than in 1936, and a further increase in acreage is expected in this group of states in 1938. The acreage in this group of states in 1937 was 10 percent higher than in the preceding year, but drought conditions in Mississippi and in the East Texas districts reduced yield and as a result production was 6 percent less than in 1936.

#### Intermediate States

Growers in the intermediate states (North Carolina, Virginia, Maryland, New Jersey, Ohio, southern Illinois, Tennessee, Arkansas, Missouri, and parts of California), reported substantially lower prices for tomatoes in 1937 than were received in 1936. As a consequence, there probably will be a decrease in acreage in this group of states in 1938. Because of the favorable prices received for the 1936 crop in these states, acreage was increased about 9 percent in 1937, and with near-average yields a record crop was produced. The average price of 80 cents per bushel, received by growers in these states, is about 15 percent below prices for the 1936 crop.

#### Late States

Preliminary reports from the 14 late States indicate the largest crop on record, and much lower prices than were received during the last three seasons. As a result of these lower prices, growers are likely to decrease the acreage planted in 1938. The acreage planted in 1937 was the largest on record and was 4 percent larger than the harvested acreage in 1936 and 18 percent above the 5-year (1928-32) average. As a result of the increase in acreage and exceptionally high yields, estimated production was about 18 percent more than in 1936, and about 37 percent more than the 5-year average. The estimated price of 70 cents per bushel is 18 percent below 1936, and 28 percent below the 5-year average.

Based on the smaller crop in prospect, it is estimated that prices received for tomatoes in the southern district of California, which produces late tomatoes for the fall market, will be somewhat higher than in 1936. Should prices measure up to expectations, it is probable that growers in this area will increase their plantings slightly in 1938. The acreage in 1937 was about 15 percent less than in 1936, and 37 percent less than the 5-year (1928-32) average. Estimated production is 16 percent below that in 1936, and indications are that prices will average \$1.85 per bushel, as compared with \$1.75 per bushel for the 1936 crop.

## 3 - tomatoes

## Acreage, production, and farm price of tomatoes for market

Group	Acreage				
	5-yr. av.	1934	1935	1936	1937
	1928-32				
	Acres	Acres	Acres	Acres	Acres
Fall 1/ .....	4,010	4,300	8,500	7,300	10,700
Early (1) 2/ .....	10,990	16,000	15,500	11,000	17,200
Early (2) 3/ .....	27,880	27,500	23,700	35,200	27,800
Second early 4/ .....	34,880	47,650	47,050	44,150	48,700
Intermediate 5/ .....	36,910	52,110	51,900	48,030	52,150
Late (1) 6/ .....	30,310	35,190	35,300	35,050	36,700
Late (2) 7/ .....	9,560	7,250	7,100	7,150	6,000
Total all States ....	154,540	190,000	189,050	187,880	199,250
	Production				
	1,000	1,000	1,000	1,000	1,000
	bushels	bushels	bushels	bushels	bushels
Fall .....	256	334	429	584	481
Early (1) .....	1,218	2,048	1,829	990	1,342
Early (2) .....	2,064	1,741	1,634	2,636	2,234
Second early .....	3,540	4,781	3,547	3,436	3,243
Intermediate .....	4,938	6,344	7,306	6,821	7,195
Late (1) .....	4,387	4,783	5,109	5,049	6,024
Late (2) .....	860	1,044	909	930	760
Total all States ....	17,263	21,075	20,763	20,446	21,299
	Farm price per bushel				
	Dollars	Dollars	Dollars	Dollars	Dollars
Fall .....	2.57	2.21	2.02	2.30	2.07
Early (1) .....	2.39	2.60	2.40	3.50	3.20
Early (2) .....	2.51	2.40	1.93	2.32	2.65
Second early .....	1.45	0.85	1.24	1.22	1.59
Intermediate .....	1.02	0.86	0.73	0.94	0.80
Late (1) .....	0.98	0.78	0.82	0.86	0.70
Late (2) .....	1.57	1.60	1.60	1.75	1.85
Total all States ....	1.46	1.21	1.15	1.34	1.06
1/ Florida, Texas (acreage planted fall of previous year).					
2/ Florida (south).					
3/ California (Imperial Valley), Florida (other), Texas (lower valley).					
4/ Georgia, Louisiana, Mississippi, South Carolina, Texas (other).					
5/ Arkansas, California, Illinois (Union County), Maryland, Missouri, New Jersey, North Carolina, Ohio (southeast), Tennessee, Virginia.					
6/ California (north district), Colorado, Delaware, Illinois (other), Indiana, Iowa, Kentucky, Michigan, New York, Ohio (other), Oregon, Pennsylvania, Utah, and Washington.					
7/ California (south district).					





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## THE ONION OUTLOOK FOR 1938

### Summary

Commercial onion acreage in the United States is expected to increase slightly in 1938, the Bureau of Agricultural Economics points out in the 1938 Outlook. As a result of the higher prices received by growers for the 1937 crop, over the preceding year, acreage increases are expected principally in the early group of States producing Bermuda and Creole types and in the muck-land areas of the North Central group of late States. The acreage trend in these areas has been downward during the recent years of relatively low prices.

Cash market prices, at Chicago, for late onions from the North Central States averaged \$1.43 per 100-lb. during the first week of October 1937 compared with 97 cents for the same period in 1936. Rail shipments to October 1 were 18 percent above the previous year and a proportional increase is estimated in motortruck shipment. Since harvest time, prices at terminal markets have tended to rise slightly because of the probability of heavy shrinkage of onions in storage. This is already being experienced to some extent in all late-crop States east of the Mississippi. Relatively high prices were paid for winter and early spring marketings of the 1934 and 1935 late onion crops, with the result that near-record and record acreages were planted in 1935 and 1936, respectively.

With prospects of favorable prices for late storage onions from the 1937 crop, onion growers may increase the acreage for 1938 by as much as 6 percent. Such an increase, with average yields, would produce 15,800,000 sacks of commercial onions for the United States in 1938. This would be a million sacks larger than the 1937 crop and would result in lower prices.

### Outlook by Regions

In the early producing States (California, Louisiana, and Texas) the 1937 crop of Bermuda-type onions was 36 percent smaller than the crop of the previous year. Prices received by growers in 1937 were nearly double those received in 1936. With the expectations of a favorable clean-up for the late-storage onion stocks in the spring of 1938, it is highly probable that the growers in these three States will increase the acreage of Bermuda and Creole onions from 5 to 10 percent. Should favorable growing conditions prevail in the spring of 1938, the Bermuda onion crop probably would total more than 3 million sacks, and these supplies probably would force onion prices to lower levels than those received for the 1937 crop.

Onion production during 1937 in the intermediate States (New Jersey, Virginia, Kentucky, Oklahoma, Texas-north, Iowa-Scott County district, Washington-Walla Walla County, and California) was the second largest crop of record but the prices received by growers were considerably above those received for the 1936 crop. The prices received in 1937, despite the improvement over 1936, were still slightly below average. This is not likely to stimulate a further expansion of acreage in this group of States for 1938.

## Onions, #2

In the eastern late-crop States (Massachusetts, New York, and Pennsylvania) the acreage in 1937 was increased 11 percent over that of 1936, 19 percent over that of 1935, and 61 percent over that of the 5-year (1928-32) average. Although the prices received by growers to date in this group of States are showing considerable improvement in 1937 over the preceding year, they are still below average. The 1938 acreage in this group of States is expected to remain about the same as the previous year or show a slight decrease.

In the late-producing central States (Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, and Iowa other than the Scott County area) the onion acreage in 1937 was 12 percent less than the previous year and 25 percent less than average. The acreage trend has been downward in this group of States since 1932 owing principally to the low prices received by growers. Prices received by growers to date in these States for 1937 show a decided improvement over the previous year and a slight gain over the 5-year (1928-32) average. Acting under the stimulus of these higher prices, growers in this central group of late-producing States are expected to increase their acreage from 5 to 10 percent in 1938.

Growers in the western late States (Idaho, Colorado, Utah, Nevada, other Washington, Oregon, and California) planted 4 percent less acreage in 1937 than in 1936 and 5 percent less than the average acreage. The average price being received by onion growers in the Western States for the 1937 onion crop is slightly above that received in 1936; however, the level of prices for western-grown onions has been very low since 1932. In spite of this, the level of acreage has remained fairly stable, and it is not expected there will be much change in 1938.

## Onions: Acreage, production, and farm price

Commodity	5-year average : 1928-32 :	1933	1934	1935	1936	1937
<u>A c r e a g e</u>						
	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>
Early (Bermuda) 1/	23,060	19,650	25,150	26,550	34,970	24,550
Intermediate 2/	8,330	10,400	12,390	17,200	20,200	16,400
Late:						
Eastern 3/	10,990	12,190	12,330	14,780	15,900	17,610
Central 4/	26,520	24,480	21,000	26,900	22,580	19,930
Western 5/	15,530	13,950	13,950	15,800	15,420	14,820
Total, late	53,040	50,620	47,280	57,480	53,900	52,360
TOTAL, all States	84,430	80,670	84,820	101,230	109,070	93,310
<u>P r o d u c t i o n</u>						
	<u>sacks</u>	<u>sacks</u>	<u>sacks</u>	<u>sacks</u>	<u>sacks</u>	<u>sacks</u>
Early (Bermuda)	2,308	1,355	1,833	1,852	3,302	2,112
Intermediate	1,337	1,570	1,364	2,522	2,191	2,399
Late:						
Eastern	2,320	2,752	3,333	3,101	4,237	3,947
Central	4,193	3,692	3,094	3,560	4,431	3,219
Western	3,034	2,802	2,873	3,511	3,066	3,385
Total, late	9,602	9,246	9,310	10,172	11,734	10,051
TOTAL, all States	13,247	12,171	13,007	14,546	17,227	14,562
<u>P r i c e p e r 100-p o u n d s a c k 6/</u>						
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
Early (Bermuda)	1.32	1.16	1.16	2.72	.78	1.54
Intermediate	1.29	1.36	1.41	1.38	.93	1.25
Late:						
Eastern	1.27	1.25	1.11	1.25	.76	1.15
Central	1.19	1.01	1.22	1.11	.71	1.20
Western	1.18	.83	.88	.80	.68	.85
Total, late	1.21	1.03	1.07	1.04	.72	1.06
TOTAL, all States	1.31	1.09	1.13	1.32	.76	1.16

1/ Louisiana, Texas, California.

2/ New Jersey, Virginia, Kentucky, Oklahoma, Texas, North Iowa, Scott County; Washington, Walla Walla County; California.

3/ Massachusetts, New York, Pennsylvania.

4/ Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, other.

5/ Idaho, Colorado, Utah, Nevada, Washington, other, Oregon, California.

6/ Average price received by growers for crop marketing season.





## THE WATERMELON OUTLOOK FOR 1938

The prospect is for a slightly smaller watermelon acreage in 1938, particularly in the second-early and the late States, the Bureau of Agricultural Economics reports. The 1937 crop was one of the largest on record, chiefly because of high yields, and prices to growers averaged considerably lower than in 1936. With normal growing conditions for 1938 in producing sections and with average weather conditions in consuming markets, a moderate reduction in acreage of watermelons the coming year probably would result in higher returns to growers.

The 1937 season was characterized by a slight increase of acreage over that of 1936, exceptionally favorable growing weather in nearly all States, fairly high yields per acre, large total production, and below-average prices to growers. For the country as a whole, prices averaged \$103 per 1,000 melons, compared with \$127 for the 5 years, 1928-32. During the period of heaviest carlot movement from the important southeastern States, a shipping holiday was inaugurated to prevent flooding of the city markets. The total carlot movement was greater than in any year since 1931.

Acreage changes for watermelons usually correspond closely to prices received the preceding year. The relatively high prices received for the 1936 crop encouraged a general increase of plantings for the 1937 season. The trend of yields has been continuously upward since the low point of 1934, and the average of 279 melons per acre in 1937 was the largest in the last 6 years. This resulted in a total production of 75,409,000 melons, which total has been exceeded only twice before, in 1930 and 1931.

### Outlook by Regions

Of the two early States, Florida increased its 1937 plantings to 19,500 acres, after having reached an unusually low level of 16,000 acres in 1936. The Imperial Valley of California made no change of acreage in 1937. Unfavorable growing conditions in some parts of Florida caused the combined yield of these two early States to be only about average, but the larger acreage resulted in a total of 9,960,000 melons, approximately 1 million more than in 1936. Good demand prevented prices to growers dropping more than \$4 below the high 1936 average of \$170 per 1,000 melons. The 1937 average of \$166 per 1,000 probably will stimulate early plantings for the 1938 season. If higher-than-average yields are obtained, any considerable increase of acreage is likely to result in lower prices for the 1938 crop.

In the second-early States (Georgia, South Carolina, North Carolina, Alabama, Mississippi, Louisiana, Texas, and Arizona), which usually produce more than half the total United States watermelon crop, the 1937 plantings were increased slightly to about 175,500 acres. That figure has been exceeded only twice before,-- in 1934 and 1935. The average yield per acre increased greatly over the light yield of 1936 and resulted in a production of about 40,694,000 melons. This exceeded all previous records except for 1930. Georgia alone had 16,000,000 melons. Prices to growers in the eight second-early States declined rather sharply to an average of \$102 per 1,000 melons, compared with the high level of \$128 in 1936, and the total farm value of this second-early crop was

Watermelons #2.

considerably less than that of 1936. The rather low returns per carload in 1937 probably will tend to restrain any further increase of plantings for 1938. Acreage held at the present level, with normal growing conditions, probably would result in a mid-summer production of watermelons as large as can be marketed with favorable returns to growers. The large 1937 crop resulted chiefly from exceptionally favorable growing conditions.

The late States (Virginia, Maryland, Delaware, New Jersey, Indiana, Illinois, Iowa, Arkansas, Missouri, Oklahoma, Colorado, Washington, Oregon, and California other than Imperial Valley), encouraged by the very favorable returns in 1936, planted a record high total of 67,490 acres in 1937, about 6 percent more than the year before and nearly 50 percent above their 1928-32 average figure. Yields averaged 367 melons per acre (somewhat above the 10-year average), and a record-breaking crop of almost 25,000,000 melons was produced. Consequently, prices to growers dropped to the lowest level since 1932, averaging only \$80 per 1,000 melons in these 14 States. This situation probably will result in a curtailment of acreage for 1938, in the hope of restoring prices to the very favorable level of 1936, when this group produced only slightly more than 20,000,000 melons.



### 3 - Watermelons

Watermelons: Commercial acreage, production, season average price received by farmers, and value, by groups of States, average 1928-32, annual 1934-37

Item and group of States	Average : 1928-32	1934	1935	1936	Preliminary : 1937
ACREAGE:	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>
Early .....	41,460	30,400	26,000	23,500	27,000
Second-early ...	151,230	139,500	136,840	169,200	175,500
Late .....	45,310	64,410	60,190	63,900	67,490
Total .....	238,000	234,310	273,030	256,600	269,990
	1,000	1,000	1,000	1,000	1,000
PRODUCTION:	<u>melons</u>	<u>melons</u>	<u>melons</u>	<u>melons</u>	<u>melons</u>
Early .....	15,202*	9,427	10,500	3,942	9,960
Second-early ...	39,853*	29,466*	36,171*	33,826*	40,694
Late .....	16,714*	21,398	20,208	20,571	24,755
Total .....	71,774*	60,311*	66,879*	63,339*	75,409
	Dollars	Dollars	Dollars	Dollars	Dollars
FARM PRICE:	<u>per 1,000</u>	<u>per 1,000</u>	<u>per 1,000</u>	<u>per 1,000</u>	<u>per 1,000</u>
Early .....	138	139	129	170	166
Second-early ...	107	98	81	128	102
Late .....	120	99	107	109	80
U. S. average	127	105	97	128	103
	1,000	1,000	1,000	1,000	1,000
FARM VALUE:	<u>dollars</u>	<u>dollars</u>	<u>dollars</u>	<u>dollars</u>	<u>dollars</u>
Early .....	2,837	1,311	1,358	1,521	1,651
Second-early ...	4,083	2,866	2,716	4,305	4,155
Late .....	1,869	2,126	2,158	2,233	1,980
Total .....	8,794	6,303	6,232	8,059	7,786

\* / Includes some quantities not harvested on account of market conditions.

Early States: Florida, and Imperial Valley of California.

Second-early States: Georgia, South Carolina, North Carolina, Alabama, Mississippi, Louisiana, Texas, and Arizona.

Late States: Virginia, Maryland, Delaware, New Jersey, Indiana, Illinois, Iowa, Arkansas, Missouri, Oklahoma, Colorado, Washington, Oregon, and California other than the Imperial Valley section.



## THE OUTLOOK FOR TRUCK CROPS FOR COMMERCIAL MANUFACTURE FOR 1938

### General Summary

The total supply of canned vegetables for 1937-38 is expected by the Bureau of Agricultural Economics to be 15 to 20 percent above that of last year. It appears to be somewhat larger than necessary to provide for normal domestic consumption in 1937-38 and to replenish carry-over stocks, which reached unusually low levels at the beginning of the 1936-37 marketing year and continued low into the 1937-38 season.

Chiefly because of this large supply, average wholesale prices of canned vegetables are currently from 20 to 25 percent below the level of a year ago. These lower prices in turn are likely to cause canners to contract with growers for less acreage in 1938 than in 1937. The level of wholesale prices of canned vegetables in December and January has in the past exerted a considerable influence upon the prices at which canners will offer to contract acreage in the following season. If the present level of prices continues into these months, it is probable that the prices at which canners will contract with growers in 1938 will be generally below those of 1937.

With higher-than-normal stocks in prospect at the beginning of the 1938-39 marketing year, the requirements of normal consumption and the maintenance of reasonable prices and incomes to growers indicate the desirability of a reduction in the 1938 planted acreage of several important crops (notably snapbeans, sweet corn and green peas) to a level ranging from 15 to 25 percent below that of 1937.

Although acreage planted in 1937 appears to be only about 2 percent above that of 1936, production has risen approximately 15 percent because of increased yields. This slight expansion in acreage constituted a break in the 5-year cycle (3 years of expansion followed by 2 of contraction) which has characterized these crops in the past. With the present heavy supplies of canned vegetables and relatively low prices, the typical downward movement may be resumed in 1938.

Supplies of three of the major canned vegetables, snapbeans, sweet corn, and green peas, are considerably larger than in 1936, and current prices are lower. Supplies of canned tomatoes are at approximately the level of 1936-37, and prices are about the same as a year ago. Tomato supplies would have been larger but for the fact that unfavorable growing conditions in August and September reduced yields, so that the production of tomatoes is indicated to be about 10 percent below that of 1936.

For most of the minor canning crops, the situation parallels that of canning crops in general. The indicated production of beets in 1937, for example, is approximately 35 percent above that of 1936 and a record pack is in prospect. The indicated production of lima beans is up 27 percent and that of cabbage for kraut is 16 percent above the relatively



## Snap Beans for Manufacture, #2.

last marketing season. Indications are that wholesale prices will continue low. The December-January wholesale price is an important factor in determining the contract prices to growers for the following season. Judging from the present low level of prices for the canned product, it appears that contract prices will be made with growers in 1938 for a smaller acreage<sup>at</sup> prices per ton below the 1937 contract prices.

### Supply and consumption both large

Plantings of snap beans for commercial manufacture in 1937 were 12 percent larger than the 1936 acreage. The production of 100,400 tons estimated for this season exceeds the 1936 estimated production by about 30 percent on account of the larger acreage and better yields per acre obtained this season. The 1936 pack was around 6,429,000 standard cases. Although pack statistics for 1937 are not yet available, the large production this year, exceeding the previous record-production in 1929, indicates that this year's pack will equal or exceed that year's record pack of 8,500,000 cases containing 24 no. 2 cans.

Last year's consumption of canned snap beans was 12 percent less than the unusually heavy consumption recorded for the 1935-36 season. During 3 of the last 6 years, the disappearance has been greater than the yearly pack, reducing carry-over to unusually low levels. Such factors as the quantities of competing winter vegetables, particularly green beans, and the buying power of consumers, have a bearing on the disappearance of the canned product. Although there has been a rather wide range in consumers' requirements during the last 6 years, between 7,000,000 and 7,500,000 cases of canned snap beans would seem ample to allow for the 1938-39 consumption requirements.

### Acreage, yield, and production

It seems probable that the carry-over into the 1938-39 marketing season will be somewhat heavier than for recent years on account of the 1937 record production. But judging from past records, it would seem that canners should be able to market about 7,000,000 cases in 1937-38. This will leave a carry-over of 2,000,000 cases. A pack of about 6,500,000 cases in 1938 would seem to be adequate to meet average consumption requirements in 1938-39 and leave a moderate carry-over. With average growing conditions, a planting of 50,000 acres in 1938 would produce such a pack. This is a reduction of over 20 percent from the acreage planted in 1937, but it is about an 8-percent increase over the average planted acreage for the 5 previous years.

# THE OUTLOOK FOR TOMATOES FOR MANUFACTURE FOR 1938

## Summary

The total domestic supply of canned tomatoes for the 1937-38 marketing season is indicated at 25.4 million cases, basis no. 2's. With present prices at a relatively low level, it appears probable that canners will contract a smaller acreage with growers in 1938, at a scale of prices not exceeding those prevailing in 1937. Under average growing conditions, the planting of 395,000 acres of tomatoes for manufacture, or about 15 percent less than the acreage planted in 1937, probably would be sufficient to keep the supply within the limits of average consumption requirements and leave a carry-over at the end of the 1938-39 season of 2 million to 3 million cases.

Canners contracted acreage in 1937 at slightly higher prices than in 1936, but the acreage planted decreased 3 percent from that in 1936, and lower yields reduced the production to 1,793,500 tons. This was the third largest crop on record, but was 10 percent below the 1936 production. Although this production may result in a pack of about 23.5 million cases of canned tomatoes, which is above average but slightly below the pack of 1935-36, the increased production and pack of competing commodities will undoubtedly affect the market for canned tomatoes during both the 1937-38 and the following marketing season.

Tomatoes for manufacture: Acreage, production, supply, disappearance, and prices						
Marketing : season : August 1 : to July 31 :	Planted : acreage :	Production : for : manufacture :	Average : price : to : growers :	Supply of : canned tomatoes : (pack plus can- : ners' carry-over) :	Disappearance of : canned tomatoes : from canners' : hands :	Wholesale price : canned tomatoes : (f.o.b. : Indiana)
5-yr. av. )	Acres	Tons	Per ton	1,000 cases no. 2s	1,000 cases no. 2s	Per dozen no. 2 cans
1928-32 )	324,003	1,293,000	\$13.27	24,477	21,681	\$ .86
1933-34	296,250	1,081,300	11.39	22,261	21,391	.85
1934-35	435,620	1,420,700	12.03	23,246	21,916	.85
1935-36	510,150	1,689,000	11.68	28,315	26,885	.70
1936-37	477,100	1,987,500	12.64	25,639	23,732	.74
1937-38	462,300	1,793,500	*12.87	25,407	--	1/ .65

\* Indicated.  
1/ Current October price.

## Prices about average

Preliminary estimates indicate that the average price received by growers of tomatoes for commercial manufacture was slightly higher in 1937 than in 1936, but was 3 percent lower than the 5-year (1928-32) average. During the marketing season ended July 31, 1937, however, wholesale prices of canned tomatoes averaged 6 percent higher than in the previous season, but 14 percent less than the 5-year average. Current prices received by canners for canned tomatoes are about the same as a year ago and remain on a relatively low level.

The level of prices received by canners in December and January is usually a significant factor in determining prices at which acreage will

## Tomatoes for Manufacture #2.

be contracted with growers the following season. During December 1936 and January 1937 prices received by canners were relatively low because of the large supplies of canned tomatoes. But, owing to the rising trend in the consumption of tomato juice and other tomato products, canners made contracts with growers in 1937 at a slightly higher scale of prices than in 1936.

### Canned supplies above average

Plantings in 1937 were only 3 percent smaller than in 1936 and only 9 percent smaller than the record-high 1935 acreage. Unfavorable weather conditions -- intense heat and excessive rainfall -- occurring in most states late in August and early in September, affected yields adversely. The indicated yield per acre in 1937 is 18 percent less than the record yield of 1936, and 8 percent less than the 10-year (1923-32) average. The total indicated production of tomatoes for manufacturing in 1937 (as estimated on September 23) is 10 percent smaller than the 1936 crop, but the third largest crop on record.

During recent years the proportion of the crop utilized as canned tomatoes has declined because of rapid expansion in the canning of tomato juice and other tomato products. In 1936, apparently about 40 percent of the tonnage was used as canned tomatoes, and from 17 to 19 percent as tomato juice. The remainder of the crop went into such products as catsup, pulp, pastes, and puree. The proportion of the 1937 crop manufactured as canned tomatoes probably will be less than 40 percent. From 19 to 22 percent of the crop probably will be processed as tomato juice, and the remainder of the crop will be manufactured as other tomato products.

Although statistics of the pack from the 1937 crop are not yet available, the pack of canned tomatoes is expected to be about 3 percent below the 1936 pack, but 10 percent above the 10-year (1926-35) average. A pack of tomato juice not much in excess of the 1936 pack is expected because of low yields and poor quality in most juice-packing states. The pack of tomato juice in 1936 totaled 16,017,000 cases (basis no. 2's), compared with 11,256,000 cases in 1935, 6,688,000 cases in 1934, and 5,072,000 cases in 1933. A pack of tomato pulp and other tomato products in excess of the 1936 pack is expected, in line with the upward trend of the pack of these products during recent years. The pack of tomato pulp in 1936 totaled 4,267,000 cases (basis no. 2's), compared with 3,656,000 cases in 1935, 3,259,000 in 1934, and 2,800,000 cases in 1933.

Carry-over of canned tomatoes during the last three marketing seasons has been on an upward trend but on a relatively low level when compared with the annual carry-overs during the 10-year (1926-35) period. For the season beginning August 1, 1937, canners' carry-over was estimated at 1.9 million cases. Adding this carry-over to the estimated pack indicates a total supply of domestic canned tomatoes for the 1937-38 marketing season about the same as the supply of last season and 4 percent larger than the 10-year average.

### Disappearance large

The supply of canned tomatoes at the beginning of the 1936-37 season (August 1, 1936) was the largest in the last 6 years, with the exception of



### Tomatoes for Manufacture #3.

the 1935-36 supply, but there was fairly active demand at relatively low prices, so that the disappearance from canners' warehouses for the 12 months ended July 31, 1937, was the largest in the last 6 years, with the exception of the 1935-36 disappearance. The total disappearance for 1936-37 was 23,732,000 cases, compared with the 10-year (1926-35) average of 21,802,400 cases. Exports of canned tomatoes last season remained on a relatively low level, amounting to only 81,000 cases. Imports equivalent to 2,057,000 cases were the smallest of any one year in the last 13 years.

On the basis of the present level of prices received by canners, the domestic supply of tomatoes, and the record supply of competing commodities, it appears that the movement from canners' hands for the 12 months ending July 31, 1938, will not greatly exceed the 10-year (1926-35) average disappearance of about 22 million cases, and that the carry-over into the 1938-39 season will probably be not less than 3 million cases.

#### Acreage requirements for 1938-39 season

In planning their acreage for 1938, canners and growers of tomatoes for manufacture are faced with the problem of making such adjustments in acreage as will probably yield packs of tomatoes and tomato products that can be marketed during the 1938-39 season at prices above the low levels now prevailing. Judging from past records of supply and disappearance, it appears that canners may be able to market a total of 23.5 million cases, in 1938-39, at prices approximating the 1932-36 level. In this event, a pack not in excess of 22.5 million cases (basis no. 2 cans) would fill consumption requirements and leave a carry-over of approximately 2 million cases at the end of the season. This carry-over would be much larger than the average of the last five seasons.

A production of approximately 1,500,000 tons probably would provide for the required pack of canned tomatoes and leave an adequate tonnage for the manufacture of juice and other tomato products. This tonnage would allow for a pack of tomato juice in line with the increased demand of the last 2 years. At the 5-year (1932-36) average yield of 4.1 tons per acre, it would require a planting of approximately 395,000 acres, or 15 percent less than the 1937 acreage of 462,300 acres, to produce a pack of 22.5 million cases and allow sufficient acreage for the production of tomatoes for juice and other tomato products.



# THE OUTLOOK FOR GREEN PEAS FOR MANUFACTURE FOR 1938

## Summary

A planting of 250,000 to 280,000 acres of peas for canning and quick freezing, with average yields and prospective carry-over, would provide a supply sufficient to meet the average requirements of consumers during the 1938-39 marketing season and leave a normal carry-over at the end of the season. Past records indicate that canners may be able to market around 19,000,000 cases during the 1938-39 marketing season at wholesale prices somewhat higher than the low level prevailing during the current marketing season. With a carry-over from 1937-38 of 5,300,000 to 6,300,000 cases and a pack of 16,000,000 to 17,000,000 cases, the supply would appear sufficient for average consumption requirements. A pack of this size could be produced by planting 235,000 to 265,000 acres, allowing for a normal abandonment and average yields. In addition, about 15,000 acres would be required to provide a sufficient quantity of peas for quick freezing and other uses. This would result in a reduction of 19 to 27 percent below acreage planted in 1937.

Green Peas for canning: Acreage, production, supply, disappearance, and prices

Marketing season	Planted	Production	Average price	Supply of canned peas	Disappearance from	Wholesale price of canned peas
May 1 to	acreage	for	to	(pack plus	canners' hands	(Wisconsin
April 30	:	canning	growers	carry-over)	:	brokers)
5-year av.)	Acres	Tons (shelled)	Per ton	1,000 cases no.2s	1,000 cases no.2s	Per dozen no.2 cans
1928-32	245,414	182,070	\$ 54.13	20,632	16,612	\$ .96
1933-34	228,300	136,980	42.48	15,393	14,493	1.11
1934-35	280,390	165,370	50.09	16,642	15,842	1.16
1935-36	341,360	268,100	51.80	25,499	20,599	.803
1936-37	337,050	167,670	51.56	21,486	18,653	.914
1937-38*	344,330	260,080	53.63	26,300	--	1/ .75

\* Indicated.  
1/ September 1937.

## Largest supply on record

The pack of canned peas for 1937 is placed at 23,500,000 cases of 24 no. 2 cans, which is the second largest pack on record, being exceeded only by the pack of 1935 of 24,699,000 cases. The carry-over from the marketing season of 1936-37 is estimated at 2,800,000 cases. The supply of canned peas for the marketing season, May 1, 1937, to April 30, 1938, is therefore about 26,300,000 cases. This is the largest supply on record, and exceeds the previous record of 25,535,000 cases established in 1930-31 by approximately three-fourths of a million cases. During the last 5 marketing seasons, supply ranged between 14,966,000 cases in 1932-33 and 24,599,000 cases in 1935-36.

## Prices continue at low level

Current prices of canned peas are about 75 cents per dozen no.2's



f.o.b. Wisconsin cannery, a low level in comparison with the averages of the preceding 5 years. Prices in September were a little above the level of March, April, and May 1936, but more than 15 cents below the same 3 months of 1937. Continuation of prices at the current level in the remaining portion of the marketing season would result in an average price below that of the 1935-36 season, which was the lowest in the period since 1921.

Prices to growers in 1937 averaged \$53.63 per ton of shelled peas, only slightly below the 1928-32 5-year average of \$54.13. Prices to growers have risen over \$11 per ton since 1933, when the price was \$42.48 per ton. With continued low prices to canners, it is probable that the 1938 price to growers will be lower than in 1937.

#### Increased disappearance expected this season

Average disappearance from canners' hands for the five marketing seasons ending 1935-37 was about 16,400,000 cases. This period includes several depression years, however, when effective demand was very low. The average of the two marketing seasons 1935-36 and 1936-37 was over 19,600,000 cases, the 1935-36 season being one of record disappearance. Comparison of movement from canners' hands for June, July, and August of 1935 and 1937 shows shipments in 1937 to be about 1,800,000 cases behind those of 1935, while stocks on hand September 1, 1937, are about 2,600,000 cases larger than those on September 1, 1935. Low prices coupled with relatively high consumer income should tend to increase the amount of disappearance for the current marketing season. However, in view of the fact that the supplies of competing canned and fresh vegetables are abundant, it is doubtful that consumption will exceed to a great extent the record quantity of 20,599,000 cases reached in the 1935-36 marketing season. It appears reasonable from the foregoing that disappearance from canners' hands will be about 20,000,000 or 21,000,000.

#### Heavy carryout from 1937-38 season in prospect

With a supply of 26,300,000 cases and a disappearance similar to that of the 1935-36 season, the carry-over at the end of the 1937-38 season would be within a range of 5,300,000 to 6,300,000 cases. This maximum would be 300,000 cases above any previous carry-over, and the minimum would be more than double the average carry-over for the five seasons ending with 1936-37. The carryout from the 1930-31 season, the year of the second largest supply, was 6,000,000 cases.

#### Downward trend in yields

There has been a marked downward trend in yields of peas for manufacture since the early 1920's. Although there was some recovery from the low levels of the 3 years 1931 to 1933, yields have not reached those recorded from 1918 to 1928. The average for the 5 years 1928 to 1932 was 1,610 pounds per acre. The period 1933 to 1937 showed an average of 1,428 pounds with yields in 2 years reduced by drought. Therefore, it is logical to assume a new normal yield of 1,500 to 1,600 pounds per acre.

#### 1938 acreage requirements

If consumer income continues near current levels in 1938, about

### Green Peas for Manufacture #3.

19,000,000 cases can be consumed next season at prices somewhat higher than those prevailing in 1937. A pack of 16,000,000 to 17,000,000 cases, added to the carry-over from the 1937-38 marketing season, should meet requirements and leave a carryout at the end of the season that would insure consumers a supply of canned peas and not be burdensome to canners.

A pack of 16,000,000 to 17,000,000 cases would require a production of about 170,000 to 181,000 tons of shelled peas. With a yield of 1,500 to 1,600 pounds per acre, the tonnage required could be produced by planting 210,000 to 240,000 acres. In addition to this acreage, there will probably be needed about 15,000 acres to provide tonnage for quick freezing and other uses, and an average allowance for abandonment of some 25,000 acres. Therefore, plantings of 250,000 to 280,000 acres would appear to be desirable. This would represent a reduction of 19 to 27 percent from the plantings of 344,330 acres in 1937.





# THE OUTLOOK FOR SWEET CORN FOR MANUFACTURE FOR 1938

## Summary

With the present supply of canned corn the second largest on record and with current prices to canners considerably below those of last year, a reduction in acreage of corn for canning and probably also in prices to growers is in prospect for 1938. Assuming a carry-over of 2 to 4 million cases from the 1937-38 marketing season, a pack of 15,000,000 cases in 1938 would be enough to provide for a level of consumption somewhat above that of the 5-year period 1928-32. Under average growing conditions, this pack could be made with a planting of around 320,000 acres of canning corn in 1938, as compared with the 1937 planting of about 450,000 acres.

Sweet corn for canning: Acreage, production, supply, disappearance, and prices

Marketing season	Planted acreage	Production for canning	Average price to growers	Supply of canned sweet corn (pack plus carry-over)	Disappearance from canners' hands	Whse. price canned sweet corn (f.o.b. midwestern factories)
August 1 to July 31						
	Acres	Tons (in husk)	Per ton	1,000 cases No. 2's	1,000 cases No. 2's	Per dozen No. 2 cans
5-year av. 1/						
1928-32	331,700	628,000	\$11.50	19,200	15,540	\$ .735
1933-34	208,440	394,300	8.01	12,693	11,393	.758
1934-35	323,590	498,000	8.46	12,568	12,388	.998
1935-36	418,990	859,900	9.31	21,651	20,771	.694
1936-37	443,720	606,700	10.30	15,450	15,228	.96
1937-38	452,620 2/	1,044,200 2/	11.61 2/	24,722 2/	--	3/ .70
1/	Planted acreage estimated from harvested acreage for years 1928 and 1929.					
2/	Indicated as of September 15, 1937.					
3/	Early October average.					

## 1937 pack largest on record

The indicated pack of canned corn in 1937 is approximately 24,500,000 cases. This is the largest on record and exceeded that of 1936 by almost 10,000,000 cases. Carry-over stocks from the 1936-37 marketing season were small, but even so the total available supply (current pack plus carry-over) is in excess of 24,700,000 cases. This is the largest supply with which canners have begun a marketing season since 1926-27 and it surpasses the average supply of the last 5 years by almost 9,000,000 cases.

## Sweet Corn for Manufacture #2.

### Prices of canned corn lower

In consequence of the tremendous 1937 pack, prices being received by canners thus far in the marketing season are considerably below those of a year ago. Quoted wholesale prices on canned sweet corn as of September 1937 were around 70 cents per dozen No. 2 cans (f.o.b. mid-western factory), as compared with \$1 in September 1936. There is little prospect of any increase over this level of prices to canners during the remainder of the current marketing season.

### Carry-over of 2 to 4 million cases in prospect

Although the supply of competing canned vegetables is large, the low price of canned corn should encourage increased consumption during the 1937-38 marketing season. The largest disappearance from canners' hands of which there is record was a little under 20,700,000 cases in 1935-36 when canned corn prices were about the same as they now are. The average disappearance is around 15,000,000 cases. With the current year's supply of 24,700,000 cases there is thus little likelihood that all of it can be moved into consumption even at the low prices now prevailing. A carry-over of 2 to 4 million cases of canned corn into the next marketing season is therefore in prospect.

### Outlook for grower prices

As a result of these lower prices for canned corn and the prospect of a rather large carry-over, canners will probably seek to contract with growers for acreages of sweet corn at prices below those of 1937. Another unfavorable factor in the price outlook for canning corn in 1938 is the lower price almost certain to prevail for field corn. Grower prices in 1937 were the highest of any year since 1930, but not as high as in most pre-depression years.

### Acreage requirements for 1938

Planted acreages of canning corn have been unusually high for the last 3 years and in 1937 exceeded 450,000 acres, the highest in the history of the industry. Under average growing conditions, this acreage will result in a pack far in excess of past consumption levels. A pack of 15,000,000 cases of canned corn in 1938, together with a prospective carry-over of at least 2,000,000 cases, would provide for a level of consumption somewhat above that of the 5-year period 1928-32 and considerably above that of last season (1936-37). Under average growing conditions, this pack could be obtained from a planted acreage of around 320,000 acres, which would be a 30 percent reduction under the acreage of 1937.

# THE FRUIT OUTLOOK FOR 1938

## Summary

The average production of all fruits during the next 5 years (1937-41), according to the Bureau of Agricultural Economics, will probably be larger than the average for the 5-year period (1932-36) just passed. Demand on the other hand will probably average higher during the next 5-year period than the 5-year period just passed, which included the depression years, with the result that total income from fruit production will probably be somewhat higher. During the remainder of the present marketing year, ending in June 1938, demand conditions are apt to be somewhat lower than during the first part of the season and with large citrus and apple crops the seasonal rise in prices is apt to be less than usual.

The outlook for the fruit industry as a whole is considerably influenced by the level of income of consumers. Consumer demand for the total of all fruits combined is such that large fruit crops tend to result in about the same gross income as do small fruit crops. The citrus industry as a whole cannot expect much improvement in prices as the crop increases with the increase in bearing acreage and, more particularly, the increasing production of trees already in bearing. Apple, pear, grape and peach growers, on the other hand may expect some improvement in prices. But increased buying power of consumers would be a favorable influence on prices even in those instances in which total production is very large, and the gross returns to growers from sales of all fruits combined would probably move upward with an increase in consumer income.

Average per-capita production of the seven major fruits during the 6-year period 1925-30 was 167 pounds -- the same as during the past 6-year period 1931-36. Some shifts have occurred in the composition of the total, however, as shown in the following table:

Per-capita production of fruit

	1919-24	1925-30	1931-36
	Lbs. per capita	Lbs. per capita	Lbs. per capita
Apples	71	61	57
Peaches	21	20	19
Pears	8	9	10
Grapes	31	38	32
Citrus - total	30	39	49
Oranges	21	27	32
Grapefruit	6	8	12
Lemons	3	4	5
Total 7 fruits	161	167	167
Bananas	20	26	20



The increase in citrus production in recent years has offset the declines in apples and grapes. From the present indications it appears that during the next 5 years a somewhat larger total per-capita supply of fruit may be expected, but an increasing proportion of this supply will be comprised of citrus fruits.

Increasing competition may be expected in foreign markets during the next 5 years. Not only is the trend of fruit production upward in most countries for both deciduous and citrus fruits, but many European countries are taking steps to insure a larger production of deciduous fruits and to improve the quality of the crops. On the other hand, the long-time outlook for United States fruit exports has been improved by the modification and reduction of trade barriers that has taken place as a result of the trade agreements the United States has concluded within the last 3 years. In practically all of these agreements some concessions were obtained on fruit from the United States. Moreover, purchasing power has been improving in the principal countries to which the United States exports fruit and should continue to improve during 1938.

## THE OUTLOOK FOR ORANGES FOR 1938

### Summary

The upward trend of orange production of the last 10 years probably will continue at a more moderate rate for the next 4 or 5 years, the Bureau of Agricultural Economics reports in its annual outlook.

Of the 34,600,000 bearing trees (5 years old and over) estimated in the groves of California, Florida, Texas, and Arizona in 1937, 45 percent had not reached full production and 26 percent were in the relatively young group of 5 to 10 years of age. With this proportion of the bearing trees yet to come into full bearing it seems reasonably certain that the average production during the next 5 years will be larger than that of the last 5 years. An average for the next 5-year period of 55,000,000 to 60,000,000 boxes seems probable, whereas the average for the last 5 years was 54,044,000 boxes. Production of Navel and other early varieties probably will not vary greatly from the present level; the upward trend of Valencias and other late varieties is expected to continue.

Prices received by growers for oranges have continued on a relatively low level since the season of 1929-30. The unfavorable effects of larger supplies of grapefruit in prospect for the next 5 years and prospective apple supplies, only slightly smaller than in recent years, probably will be offset to some extent by an improvement in consumer purchasing power. Disposal of larger quantities in foreign markets holds little promise because of an increasing production in other countries, especially in Palestine.

### Plantings Have Increased

According to the U. S. Census enumerations, the number of orange trees doubled between 1920 and 1935, total trees of all ages in groves in 1935 amounting to 38,921,000 compared with 19,663,000 in 1920. The number of bearing trees during this period rose from about 14,438,000 in 1920 to 33,115,000 in 1935. The greatest increases in bearing trees apparently occurred in the 5-year periods of 1920-25 and 1930-35. The number of nonbearing trees declined after 1925, and in 1935 comprised only 15 percent of the total trees compared with 28 percent in 1925.

### Trend of Domestic Production Upward

During the 18 seasons from 1919-20 to 1936-37, inclusive, production of oranges increased from the average of 30,121,000 boxes for the first 5 years of this period to the average of 54,044,000 boxes for the last 5 years. The trend of production during this period has been definitely upward for both California and Florida, although the Florida crop has increased at a somewhat faster rate.

With reference to the future trend of orange production, data collected in recent surveys indicate a total of about 34,600,000 bearing trees (5 years old and over) in the principal producing States of California, Florida, Texas, and Arizona, as of July 1, 1937. Of this total, about one-fourth is in that stage at which production increases very rapidly, from 5 to 10 years old, and about one-fifth is 11 to 15 years old and is only approaching full production. A rising trend of production is therefore indicated for a number of years, even though no further new plantings are made.

Navel and miscellaneous varieties, which are classed as early oranges, represent about 47 percent of the total bearing trees of all varieties, and in general, are older. About three-fifths of the bearing trees of early varieties are near the full-bearing age. The trend of production of early oranges probably will continue upward in Florida, Texas, and Arizona, but will remain about stationary in California. The plantings of Valencia and other late oranges have been heavy in recent years and the average age of trees is younger than for the early varieties. Since more than half of the bearing trees of the late varieties have not reached the age of full-bearing capacity, production of Valencias and other late oranges evidently will increase strongly during the next 5 years.

#### World Production Increasing

World production of oranges and mandarins has increased rapidly during the last 5 years. Estimates for the 1936-37 crop total 193,000,000 boxes as compared with the 5-year average, 1926-27 to 1930-31 of 160,000,000 boxes. Palestine has shown the most significant rise in production with an all-time record crop of around 11,000,000 boxes in 1936-37 compared with the 5-year average, 1926-27 to 1930-31, of 2,860,000 boxes. Noticeable increases have occurred in Italy, Brazil, Union of South Africa, Japan, Egypt, and the United States. Spain, the second largest producer of oranges and mandarins, shows a slight decline in the 5 years, 1931-32 to 1935-36 compared with the average for the 5 previous seasons, but the estimated crop for 1936-37 was the largest since 1931-32. World orange production and exports will probably continue to increase for several years.

#### No Marked Trend in Orange Exports From the United States

Exports of oranges from the United States are not likely to show much increase during the next 5 years because of increasing competition. But in years of large crops of California Valencia oranges, exports to Europe during the summer months will probably show sharp increases, only if orange crops in competing countries are small in the same years.

Canada is the principal foreign market for California oranges. The United Kingdom is the second most important outlet, but practically all the exports to that country occur during the summer season, May to October.



Exports of oranges in the 10-month period, November to August 1936-37, amounted to 2,279,000 boxes compared with 3,877,000 boxes in the same period of 1935-36. Exports of oranges in the 1934-35 season amounted to 5,425,000 boxes. Exports in 1937-38 are likely to exceed the small orange exports of 1936-37.

Prices to Growers Low

An upward trend in orange production and a substantial increase in grapefruit production are anticipated for the next 5 years, but an increase in consumer income may result in an increased demand for oranges sufficient to prevent prices lower than during the past few years. Reductions in costs of marketing, transportation, and culture have proved a definite benefit to growers in offsetting the depressing influence of expanding production on returns, and it is not unlikely that growers will seek to effect further economics in these directions. From the 1933-34 season to date, the organization called the California-Arizona Orange Industry has regulated shipments under a federal marketing-agreement program for the purpose of maintaining and improving grower returns. Industries in other States have also employed these measures from time to time. Further efforts in this field could be expected to assist growers in marketing their products to better advantage.

ORANGES: Production by States and average farm price 7 States, 1919-1936

Crop season	Production							Farm price per box	
	Cali- fornia 1/	Florida	Texas	Arizona	Alabama	Louisi- ana	Missis- sippi	Total 7 States	Average 7 States 2/
- Thousand boxes -									
1919-20	17,073	7,533	9	80	20	37	31	24,783	2.67
1920-21	22,547	9,457	5	60	82	42	25	32,218	2.25
1921-22	13,921	8,371	5	80	82	50	30	22,539	3.07
1922-23	21,286	10,897	10	81	190	60	45	32,569	2.26
1923-24	24,324	13,725	6	86	225	75	55	38,496	1.92
1924-25	18,535	11,639	17	60	2	75	3/ --	30,328	3.34
1925-26	24,200	10,044	10	86	130	100	27	34,597	2.85
1926-27	28,167	11,512	41	75	75	150	42	40,062	2.84
1927-28	22,737	9,487	70	54	110	200	50	32,708	3.76
1928-29	38,994	15,588	115	99	85	220	30	55,131	2.01
1929-30	21,483	10,304	261	137	212	187	37	32,621	3.51
1930-31	35,470	19,211	250	139	3	287	2	55,362	1.63
1931-32	34,900	14,220	520	145	80	245	54	50,164	1.32
1932-33	34,265	16,200	325	147	120	278	80	51,415	1.09
1933-34	28,439	18,100	430	155	3	245	2	47,374	1.59
1934-35	45,047	17,600	650	170	140	293	88	63,988	1.36
1935-36	33,049	18,000	777	240	2	244	1	52,313	1.60
1936-37*	30,063	22,500	2,000	175	56	309	26	55,129	1.33

\* Preliminary

1/ Production in California includes the following quantities which have no farm value:  
1933 - 977,000 boxes; 1934 - 1,395,000; 1935 - 754,000 boxes.

2/ Prior to 1924-25 average price relates to California and Florida.

3/ Production negligible.

ORANGES: Production in California and Florida by varietal groups

Crop season	Production					
	California 1/			Florida 2/		
	Valencias	Navels and miscellaneous	Total	Early and Midseason	Valencias	Tangerines
						Total
- Thousand boxes -						
1919-20	7,984	9,089	17,073	--	--	7,533
1920-21	9,942	12,605	22,547	--	--	9,457
1921-22	5,904	8,017	13,921	--	--	8,371
1922-23	9,676	11,610	21,286	--	--	10,897
1923-24	10,136	14,188	24,324	--	--	13,725
1924-25	7,297	11,238	18,535	--	--	11,639
1925-26	12,475	11,725	24,200	--	--	10,044
1926-27	13,983	14,184	28,167	--	--	11,512
1927-28	10,690	12,047	22,737	--	--	9,487
1928-29	18,947	20,047	38,994	--	--	15,588
1929-30	11,213	10,270	21,483	--	--	10,304
1930-31	18,228	17,242	35,470	--	--	19,211
1931-32	19,400	15,500	34,900	--	--	14,220
1932-33	19,324	14,941	34,265	--	--	16,200
1933-34	16,465	11,974	28,439	9,600	6,500	2,000
1934-35	26,057	18,990	45,047	10,700	4,900	2,000
1935-36	18,580	14,469	33,049	9,600	6,300	2,100
1936-37*	16,829	13,234	30,063	12,000	7,500	3,000

\* Preliminary.

1/ Production in California includes the following quantities which have no farm value:  
Valencias, 1933 - 572,000 boxes; 1934 - 717,000; 1935 - 494,000; Navels and miscellaneous,  
1933 - 405,000; 1934 - 678,000; 1935 - 260,000 boxes.

2/ Separation by varietal groups not available for Florida prior to 1933-34 season.

ORANGES: Tree numbers, U. S. Census enumerations									
STATE	CENSUS 1920		CENSUS 1925		CENSUS 1930		CENSUS 1935		
	Non-bearing	Bearing	Non-bearing	Bearing	Non-bearing	Bearing	Non-bearing	Bearing	
	Trees	Trees	Trees	Trees	Trees	Trees	Trees	Trees	
California	2,599,707	10,300,068	1,762,027	13,870,018	2,539,312	14,239,607	2,634,579	17,342,937	
Florida	2,341,341	3,684,327	6,046,261	7,305,722	3,421,837	9,002,362	2,076,538	13,355,512	
Texas	41,551	14,350	184,878	69,336	764,006	366,421	586,976	1,165,520	
Arizona	13,362	46,952	54,185	77,246	358,914	96,564	238,051	389,120	
Alabama	165,536	260,294	359,126	262,689	161,377	432,632	62,700	277,572	
Mississippi	37,350	28,127	57,109	11,406	111,981	69,703	21,290	236,639	
Louisiana	26,356	104,382	135,931	137,456	226,848	154,946	185,970	347,872	
Totals	5,225,203	14,438,500	8,599,517	21,733,873	7,584,275	24,362,235	5,805,704	33,115,172	



ORANGES: Estimated bearing acreage and percentage distribution  
by age groups as of July 1937 1/Navel and Other Early Varieties

STATE	Bearing:		Bearing trees by age groups								
	acres	trees									
	5 years	5 years	:	:	:	:	21	:	5-15	:	16 & over
	and over	and over	5	6-10	11-15	16-20	and over	:	Not in full production	:	In full production
	Acres	trees	Pct.	Pct.	Pct.	Pct.	Pct.	:	Pct.	:	Pct.
California <u>2/</u>	88,493	7,788	2	11	13	10	64	:	26	:	74
Florida <u>3/</u> ..	111,368	7,239	4	20	21	19	36	:	45	:	55
Texas <u>4/</u> .....	13,318	879	7	54	34	5		:	95	:	5
Arizona .....	3,636	321	13	61	6	6	14	:	80	:	20
Total 4 States:	216,815	16,227	3	18	18	14	47	:	39	:	61

Valencia and Other Late Varieties

California <u>2/</u>	132,749	11,683	4	25	16	15	40	:	45	:	55
Florida <u>3/</u> ..	90,708	5,896	4	22	30	29	15	:	56	:	44
Texas <u>4/</u> .....	9,152	604	4	59	32	5		:	95	:	5
Arizona .....	2,610	228	13	80	4	1	2	:	97	:	3
Total 4 States:	235,219	18,411	5	26	20	19	30	:	51	:	49

All Varieties

California <u>2/</u>	221,242	19,471	3	19	15	13	50	:	37	:	63
Florida <u>3/</u> ..	202,076	13,135	4	21	25	23	27	:	50	:	50
Texas <u>4/</u> .....	22,470	1,483	6	56	33	5		:	95	:	5
Arizona .....	6,246	549	13	69	5	4	9	:	87	:	13
Total 4 States:	452,034	34,638	4	22	19	17	38	:	45	:	55

1/ Estimates based upon surveys by age and varietal groups made in Florida in 1934; Arizona in 1935; California in 1936; Texas in 1934 and 1937. Estimates do not include tangerines.

2/ California trees calculated from acres at the rate of 88 trees per acre.

3/ Florida acres calculated from trees at the rate of 65 trees per acre.

4/ Texas acres calculated from trees at the rate of 66 trees per acre.

5/ Total bearing trees in the United States amount to about 35,500,000 trees. In addition to the total for the four States shown above, the Census of 1935 enumerated 862,000 bearing trees in Alabama, Mississippi, and Louisiana. Most of the trees in Alabama and Mississippi consist of satsumas; those in Louisiana are mostly Navels.

TANGERINES: Estimated bearing acreage and percentage distribution  
by age groups as of July 1937 1/

STATE	Bearing trees by age groups									
	Bearing:	Bearing:								
	acres	trees								
	5 years:	5 years:	5	6-10	11-15	16-20	21	5-15	16 & over	
	and	and					and	Not in full	In full	
	over	over					over	production	production	
		1,000								
	Acres	trees	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	
Florida <u>2/</u> ..	24,509	1,593	1	18	43	22	16	62	38	
California <u>3/</u>	1,602	141	4	33	23	8	32	60	40	
Texas <u>4/</u> ....	606	40	8	53	34	5		95	5	
Arizona .....	54	5	4	92	2	2	-	98	2	
Total 4 States:	26,771	1,779	1	21	41	20	17	63	37	

1/ Estimates based upon surveys by age and varietal groups made in Florida in 1934; Arizona in 1935; California in 1936; Texas in 1934 and 1937,

2/ Florida acres calculated from trees at the rate of 65 trees per acre.

3/ California trees calculated from acres at the rate of 38 trees per acre.

4/ Texas acres calculated from trees at the rate of 66 trees per acre.





## THE OUTLOOK FOR GRAPEFRUIT FOR 1938

### Summary

Bearing acreage of grapefruit has increased rapidly during recent years and the trend of production is sharply upward. Last season (1936-37) when growing conditions were only slightly above average, a record-high crop of 30,281,000 boxes was produced, which is 80 percent above the average production of 16,869,000 boxes during the previous 5 years. Since only 31 percent of the bearing trees had reached the age of full production in 1937, the Bureau of Agricultural Economics says that the trend of production during the next decade is likely to continue upward because of the increasing bearing capacity of the large number of relatively young trees.

Much of the expected increase in production will take place in the seedless varieties of grapefruit. Bearing trees in this group are two-thirds of the total bearing trees of all grapefruit and represent plantings of which only 15 percent have reached full production. The seedless varieties predominate in Texas, California and Arizona.

Under the average growing conditions of recent years, and in the light of recent production trends and potential increases in bearing surface of young trees, it seems certain that the average production of the next 5 marketing seasons (1937-41) will exceed 25,000,000 boxes, and may approach 30,000,000 boxes. It appears that crops of 30,000,000 boxes or more can be expected with increasing frequency during the next 10 years, whereas in the decade preceding 1936-37, the production averaged about 14,700,000 boxes and in only one season (1934-35) reached 20,000,000 boxes. As large crops in recent years have resulted in low prices to growers, the problem of operating groves at a profit will become more acute as production increases. Production in foreign countries is also increasing and exports will meet with greater competition.

### Trend of Domestic Production Sharply Upward

The trend in grapefruit production has been closely associated with the trend in the number of bearing trees. According to United States Census enumerations, there were 10,079,000 bearing trees in groves in 1935, compared with 3,473,000 in 1925, and 1,937,000 in 1920. The number of bearing trees in 1935 was 3 times the number in 1925 and 5 times the number in 1920. Production from the bloom of 1936 (1 year after the 1935 Census) was  $3\frac{1}{2}$  times larger than production in 1925-26, and  $4\frac{1}{2}$  times larger than the crop of 1920-21. Production during the next 5 years, however, probably will be influenced to a greater extent by the development of young trees already in bearing. Nonbearing trees reached a peak of 4,127,000 in 1930 and declined to 3,079,000 in 1935.

An analysis of surveys conducted in California, Florida, Texas and Arizona during recent years indicates a total of 12,777,000 bearing trees (5 years old and over) in groves as of July 1937. Of this total, 69 percent were from 5 to 15 years of age and had not reached full production; 31 percent were 16 years and over, or at an age approximating full production. It is significant that 50 percent of the bearing trees are 5 to 10 years of age. This means that as this large proportion of young trees increases in producing capacity it seems inevitable that production will mount to successively higher levels.

Material increases are to be expected in Texas, Arizona, and California, where the trees now in full production amount to only 4, 5, and 29 percent, respectively, of total bearing trees. Production in Texas jumped from a previous high of 2,762,000 boxes in 1935-36 to 9,231,000 boxes in 1936-37, and with 76 percent of bearing trees falling in the 5 to 10 year old group, future production probably will increase very rapidly. Texas now has nearly as many bearing trees as Florida, having increased from only 5,500 in 1920 to 4,913,000 in 1937. Florida production of 18,100,000 boxes in 1936-37 was also a record crop. In Florida, however, only 21 percent of the bearing trees are in the 5 to 10 year age group and 61 percent are near the age of full production; hence, the upward trend in production in this State will not be so pronounced as in other States.

The exact trend of total grapefruit production is difficult to forecast because it is not possible to foresee unusual growing hazards, such as hurricanes and freezes, to which the crops may be subjected. But assuming the average growing conditions of recent years, and allowing for the potential increase in bearing surface of young trees, the present bearing acreage would permit an average production during the next 5 years of approximately 30,000,000 boxes.

Neglect and abandonment of unprofitable groves is a possible modifying factor in the future trend of production. Removals made in Texas during the last 2 or 3 years amounted to more than 800,000 trees. These removals, however, consisted largely of trees damaged by the hurricane of 1933, or of trees in unfavorable locations. The weather in Texas has been favorable during the last 2 years and groves that survived the 1933 hurricane have practically recuperated from the damage of that year. In Florida the freeze of December 1934 caused considerable loss of nonbearing trees but no material loss of bearing trees. At present, the majority of grapefruit groves are well cared for in the various States and current tree removals are few.

#### World Production Increasing

World production of grapefruit has increased rapidly in the last 4 seasons. The crop of 35,000,000 boxes of last season was an all-time record, more than double the 1926-27 to 1930-31 average of 15,000,000 boxes. The chief increase in production was in the United States which produces around 80 percent of the world total. Palestine has become the second most important producer with the record harvest of 2,000,000 boxes last season compared

with the 1926-27 to 1930-31 average of 22,000 boxes. Puerto Rico which was second to the United States during the 1926-27 to 1930-31 period has shown a rapid decline, last year's crop amounting to little more than half the average of 1,100,000 boxes produced in the earlier period. The Union of South Africa and Brazil are minor producers of grapefruit but have increased production and exports substantially during the last few years.

#### Exports From the United States Declining

There has been an increase in foreign demand for grapefruit during recent years but most of this has been absorbed by increases in foreign production. The rapid increase in the production in Palestine has greatly restricted the exports of fresh grapefruit from the United States to Europe during the period, December to April, when Palestine grapefruit is being marketed. Increased competition also has developed during the summer months as a result of the increasing competition from southern-hemisphere countries, particularly Brazil and South Africa. Total exports of fresh grapefruit from the United States in the 1936-37 season September to August, were 704,000 boxes compared with 928,000 boxes in 1935-36. The decline was due to the heavy competition from Palestine during the winter and spring and to the short crop of California grapefruit for export during the summer season. Because of the heavy competition in the European market, exports of grapefruit from the United States in the next few years probably will not exceed the average exports of 995,000 boxes in the 5-year period 1931-32 to 1935-36, except in years of small competing crops. Exports during the 1937-38 season should be considerably larger than the small movement in 1936-37.

#### Outlook for Canned Grapefruit; Exports Favorable

The canning factory has become an important marketing outlet for grapefruit in Florida and Texas in recent years. Since 1928 there has been a rapid increase in the canning of grapefruit juice and sections, and during the 1936-37 season about 34 percent of the total production of Florida and Texas was used for this purpose. The total pack of grapefruit sections in Florida, Texas, California, Arizona, and Puerto Rico, increased from about 1,051,000 cases (equivalent cases of 24 No. 2 cans) in 1928-29 to the record of 4,301,000 cases in 1936-37; the total pack of grapefruit juice increased from 205,000 to the record of 6,461,000 cases during the same period.

Exports of canned grapefruit have shown a rapid increase in the last 6 years and prospects appear favorable for continued heavy exports in the next few years. Exports of canned grapefruit segments and juice in the 10-month period, November to August, of the 1936-37 season totaled 1,083,000 cases compared with 823,000 cases in the same months of the 1935-36 season. Total exports for the 1936-37 season will be about equal or larger than the record exports of 1,159,000 cases in 1934-35.



Exports of canned grapefruit segments and juice from November to October 1937-38 will depend chiefly on the size of the 1937-38 pack since there appears to be a good export demand. Little competition has developed so far from foreign suppliers of canned grapefruit but steps are being taken in Palestine to utilize citrus fruits in the byproducts plants. Probably the strongest competition at present is from Japanese canned mandarin-orange segments.

#### Prices to Growers Low

The large grapefruit crops of the last 3 seasons have returned prices to growers about equal to the low prices received for smaller crops in the depression years of 1931 and 1932. Moreover, as production has expanded, increasing quantities of grapefruit have been utilized by canning plants. Of the 30,281,000-box crop in 1936-37, over one-fourth was used in the canning of juice and segments for commercial outlets and, in addition, 3,000,000 boxes, or 10 percent, was purchased by the Federal Government for relief distribution. Although the canning of grapefruit tends to decrease the pressure of increasing supplies upon the fresh-fruit market, this is to some extent offset by competition of the canned product with fresh grapefruit.

Production in foreign countries is also increasing with the result that exports can be expected to meet with greater competition. It appears, therefore, that the marketing problem for grapefruit involves the further development of the domestic market, and will grow more acute as production increases. Such a program of development should give particular attention to reducing the cost of handling and marketing.

During recent years, marketing-control programs have been employed from time to time to improve returns to growers. It is not unlikely that further efforts in this direction would assist growers to counteract the depressing influence on price of the larger crops in prospect.

GRAPEFRUIT: Production by States and average farm price, 4 States, 1919 to 1936							Farm price
Crop season	Production					Total	per box
	Florida	California <sup>1/</sup>	Texas	Arizona	4 States	4 States	Average <sup>2/</sup>
- Thousand boxes -							Dollars
1919-20 ...	5,898	363	3	29	6,293		2.06
1920-21 ...	6,142	395	5	34	6,576		2.17
1921-22 ...	6,644	360	8	35	7,047		2.11
1922-23 ...	7,766	394	35	60	8,255		1.84
1923-24 ...	8,936	363	65	95	9,459		1.27
1924-25 ...	9,177	387	301	105	9,970		1.61
1925-26 ...	7,660	600	200	150	8,610		2.57
1926-27 ...	8,693	672	361	120	9,846		1.86
1927-28 ...	8,158	720	524	176	9,578		2.78
1928-29 ...	11,314	972	753	211	13,250		1.67
1929-30 ...	8,274	1,000	1,530	365	11,169		2.41
1930-31 ...	16,109	1,290	1,135	400	18,934		1.20
1931-32 ...	10,736	1,431	2,480	450	15,147		1.03
1932-33 ...	11,800	1,350	1,335	614	15,149		.84
1933-34 ...	10,700	1,713	1,140	800	14,353		1.12
1934-35 ...	15,200	2,167	2,760	1,240	21,367		.83
1935-36 ...	11,500	2,267	2,762	1,800	18,329		1.05
1936-37* ...	18,100	1,550	9,231	1,400	30,281		.80

GRAPEFRUIT: Production in Florida  
by varietal groups, 1933 to 1936

Crop season	Production <sup>3/</sup>		
	Seedless	Other	Total
- Thousand boxes -			
1933-34	2,800	7,900	10,700
1934-35	4,100	11,100	15,200
1935-36	4,000	7,500	11,500
1936-37 *	6,000	12,100	18,100

\* Preliminary

<sup>1/</sup> Production in California includes the following quantities which have no farm value: 1934 - 181,000 boxes; 1935 - 34,000 boxes.

<sup>2/</sup> Prior to 1924-25 farm price relates to Florida only.

<sup>3/</sup> Separation by varietal groups not available for Florida before the 1933-34 season.

GRAPEFRUIT: Tree numbers, U. S. Census enumerations

STATE	CENSUS 1920		CENSUS 1925		CENSUS 1930		CENSUS 1935	
	Non-bearing	Bearing	Non-bearing	Bearing	Non-bearing	Bearing	Non-bearing	Bearing
	Trees	Trees	Trees	Trees	Trees	Trees	Trees	Trees
Florida ..	963,336	1,681,481	951,909	2,969,910	938,874	3,595,155	1,493,438	4,929,128
Texas ....	74,039	5,1154	315,694	159,576	2,198,614	714,735	1,856,735	3,438,420
California	81,873	231,136	251,616	304,262	494,496	619,561	431,277	980,880
Arizona ..	12,768	18,819	14,568	38,988	495,254	177,068	297,478	731,032
Totals ..	1,132,016	1,936,890	1,533,787	3,472,736	4,127,238	5,106,519	3,078,928	10,079,460



## THE OUTLOOK FOR GRAPEFRUIT FOR 1938, Cont'd.

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GRAPEFRUIT: Estimated bearing acreage and percentage distribution  
by age groups as of July 1937 1/

## Early Varieties

State	: Bearing :	: Bearing :	Bearing trees by age groups							
	: acres :	: trees :								
	: 5 years :	: 5 years :	:	:	:	:	21 :	5-15 :	16 & over	
	: and :	: and :	5 :	6-10:	11-15:	16-20:	and :	Not in full:	In full	
	: over :	: over :	:	:	:	:	over :	production :	production	
	: Acres :	: 1,000 trees :	: Pct. :	: Pct. :	: Pct. :	: Pct. :	: Pct. :	: Pct. :	: Pct.	
	:	:	:	:	:	:	:	:	:	
Florida <u>2/</u> ..	: 53,676 :	3,482 :	1 :	13 :	13 :	30 :	43 :	27 :	73	
Texas <u>3/</u> ....	: 8,742 :	577 :	4 :	64 :	24 :	8 :	92 :	8 :	8	
California <u>4/</u> :	: 1,235 :	101 :	6 :	33 :	29 :	17 :	15 :	68 :	32	
Arizona .....	: 130 :	12 :	5 :	11 :	12 :	18 :	54 :	28 :	72	
Total 4 States:	63,783 :	4,179 :	2 :	21 :	14 :	27 :	36 :	37 :	63	

## Late Varieties (Seedless)

Florida <u>2/</u> ..	: 29,492: 1,917	: 3 : 30 : 28 : 24 : 15	: 61	: 39					
Texas <u>3/</u> ....	: 65,697: 4,336	: 6 : 71 : 19 : 4	: 96	: 4					
California <u>4/</u> :	: 15,618: 1,281	: 7 : 40 : 24 : 15 : 14	: 71	: 29					
Arizona .....	: 12,521: 1,064	: 17 : 70 : 8 : 3 : 2	: 95	: 5					
Total 4 States:	123,328: 8,598	: 7 : 57 : 21 : 10 : 5	: 85	: 15					

## All Varieties

Florida <u>2/</u> ..	: 83,168: 5,406	: 2 : 19 : 18 : 23 : 33	: 39	: 61					
Texas <u>3/</u> ....	: 74,439: 4,913	: 6 : 70 : 20 : 4	: 96	: 4					
California <u>4/</u> :	: 16,853: 1,382	: 7 : 39 : 25 : 15 : 14	: 71	: 29					
Arizona .....	: 12,651: 1,076	: 16 : 70 : 9 : 3 : 2	: 95	: 5					
Total 4 States:	137,111: 12,777	: 5 : 45 : 19 : 15 : 16	: 69	: 31					

1/ Estimates based upon surveys by age and varietal groups made in Florida in 1934; Arizona in 1935; California in 1936; Texas in 1934 and 1937.

2/ Florida acres calculated from trees at the rate of 65 trees per acre.

3/ Texas acres calculated from trees at the rate of 66 trees per acre.

4/ California trees calculated from acres at the rate of 82 trees per acre.

GRAPEFRUIT: Quantity canned in United States and Puerto Rico, 1921-22 to 1936-37

Season	Florida 1/	Texas 2/	Puerto Rico 3/	Other 4/	Total
	Cases 5/	Cases 5/	Cases 5/	Cases 5/	Cases 5/
- Grapefruit sections -					
1921-22	10,000	--	--	--	10,000
1922-23	150,000	--	--	--	150,000
1923-24	200,000	--	128,718	--	328,718
1924-25	350,000	--	128,027	--	478,027
1925-26	400,000	--	211,601	--	611,601
1926-27	700,000	--	308,746	--	1,008,746
1927-28	600,000	--	357,790	--	957,790
1928-29	957,000	--	94,410	--	1,051,410
1929-30	1,316,758	--	413,842	--	1,730,580
1930-31	2,712,489	--	197,719	--	2,910,208
1931-32	907,323	--	149,450	--	1,056,773
1932-33	2,161,975	--	42,986	700	2,205,661
1933-34	2,184,577	--	147,031	570	2,332,178
1934-35	3,588,042	--	136,357	11,521	3,735,920
1935-36	2,251,775	23,614	239,115	--	2,514,504
1936-37	4,057,672	62,012	181,372	--	4,301,056
- Grapefruit juice -					
1928-29	205,000	--	--	--	205,000
1929-30	173,934	--	--	--	173,934
1930-31	412,066	--	4,615	--	416,681
1931-32	247,652	--	1,170	--	248,822
1932-33	725,967	--	2,724	3,200	731,891
1933-34	610,115	--	4,461	25,900	640,476
1934-35	2,236,726	--	13,050	451,166	2,700,942
1935-36	1,758,497	346,942	45,520	51,386	2,202,345
1936-37	3,918,604	2,245,201	193,793	103,112	6,460,710

- 1/ Figures on the Florida pack were obtained as follows: 1921-22 to 1927-28, averages of various trade estimates; 1928-29, estimated by Florida Grapefruit Cannery Association; 1929-30 to date, complete surveys made by the Bureau of Foreign and Domestic Commerce.
- 2/ Figures on the Texas pack compiled from reports of the National Cannery Association.
- 3/ Prior to 1934-35, data for Puerto Rico represent U. S. receipts from Puerto Rico as reported by Bureau of Foreign and Domestic Commerce, year beginning July. Figures for 1934-35 and subsequent years compiled from reports of the National Cannery Association.
- 4/ "Other" group includes Texas prior to 1935-36. Available data for California and Arizona also included in this group.
- 5/ Cases on basis of 24 No. 2 cans.

## THE OUTLOOK FOR LEMONS FOR 1938

### Summary

Bearing acreage of lemons in California is estimated at approximately 47,000 acres in 1937, 34 percent of which has not yet reached full producing capacity. In 1936, bearing acreage was approximately 42,800 acres and non-bearing acreage was about 13,400 acres or 30 percent of the total acreage.

Should average growing conditions prevail during the 5-year period following 1937-38, the Bureau of Agricultural Economics states in its annual outlook that the present acreage of bearing and nonbearing trees will permit an average annual production for the period of at least 10,000,000 boxes, as compared with 8,046,000 boxes, average annual production for the 5-year period 1931-32 to 1935-36. Reported condition of the crop from the bloom of 1937 is low and production for the 1937-38 marketing season probably will be in line with the 5-year (1931-35) average production.

Production in foreign countries has been declining since 1932-33. Italy has usually been the largest lemon-producing country in the world, but the Italian crop declined from 17,755,000 boxes in 1932-33 to an estimated crop of 8,202,000 boxes in 1936-37. The 5-year average for the period 1926-27 to 1930-31 was 12,764,000 boxes.

Exports from the United States amounted to 617,000 boxes in 1935-36 as compared with 532,000 boxes in 1934-35. Only 219,670 boxes were exported during the first 10 months of the 1936-37 season. Freeze damage to the crop in January 1937, with a reduction in the quantity of high quality fruit, was a significant factor affecting exports. Lemon imports are of minor importance in the United States at the present time.

Prices to growers for the 1937-38 crop probably will not differ greatly from those received during the last 2 seasons when production was about average. With the prospect of a substantial increase in production after the 1937-38 season, it seems certain that increasing quantities will be diverted to byproducts, and it would appear that average annual returns to growers per box during the 5-year period following 1937-38 will trend downward.

### Trend of Domestic Production Upward

According to indications from the 1936 special California Fruit and Nut Acreage Survey, the bearing acreage (5 years old and over) of California lemons amounted to 47,000 acres in 1937, which is 10 percent larger than the bearing acreage of 1936. About 34 percent of the 1937 bearing acreage has not yet reached full producing capacity. Bearing acreage in 1936 was approximately 42,800 acres and the nonbearing acreage amounted to about 13,400 acres, or

30 percent of the total acreage. Considering the relatively large acreage yet to come into bearing and the potential increase in producing capacity of the young trees now in bearing, an upward trend of lemon production is indicated during the next 5 years.

Average annual production for the 5-year period, 1931-32 to 1935-36 was 8,046,000 boxes, with an all-time high of 10,747,000 boxes for the 1934-35 season. The crop of 1936-37 was reduced materially by severe freezes of January 1937, and the preliminary estimate of production amounts to 8,102,000 boxes. Although the loss of trees from freeze damage apparently was not serious, condition of the 1937-38 crop, as reported by growers, is lower than any condition reported during the past 18 years. Production for the 1937-38 marketing season probably will be near the recent 5-year average of 8,046,000 boxes. Should average growing conditions prevail during the 5-year period following 1937-38, the present acreage of bearing and non-bearing trees will permit an average annual production for that period of at least 10,000,000 boxes.

#### World Production Declining

There has been a marked decline in world production of lemons since the record total of 28,000,000 boxes in 1932-33, partially because of the inroads of mal secco (dry rot) in Italy, which until 1936-37 usually produced more than 50 percent of the world crop. The average annual production in Italy for the 5-year period, 1926-27 to 1930-31, was 12,764,000 boxes. Peak production was reached in 1932-33, when the crop amounted to 17,755,000 boxes. Since that season the trend has been downward, and production for 1936-37 is estimated at 8,202,000 boxes.

Japan showed a marked increase in 1936-37. Spanish production has increased slightly, although there has been a small decline during the last 2 seasons. Production in Greece shows a definite upward trend over the 1926-27 to 1930-31 average.

Exports from the United States amounted to 617,000 boxes for the 1935-36 season, when relatively large quantities were shipped to Europe, as compared with 532,000 boxes exported in 1934-35. For the first 10 months of the 1936-37 season (November 1936 - August 1937) export shipments amounted to only 219,670 boxes. The severe freezes of January 1937 in California caused a considerable loss of lemons and reduced the quantity of high-quality fruit for fresh market channels. Canada is the chief foreign outlet although considerable quantities are exported to other nearby countries and to the Orient.

Lemon imports are of minor importance in the United States at the present time. Average annual imports for the period 1931-32 to 1935-36, amounted to only 67,200 boxes as compared with an average of 727,800 boxes during the preceding 5-year period.



Price Outlook

The summer demand for lemons during recent years has been strengthened by higher-than-normal temperatures in consuming markets. It is highly improbable that these temperatures will continue to run above normal in the future, as they have in recent years. Consumer purchasing power, however, may average higher in the next 5 years than in the last 5 years.

The average annual price returned to growers for the five seasons, 1931-32 to 1935-36, was \$2.20 per box. The price received for the 1934-35 crop of 10,747,000 boxes was \$1.41 per box, the lowest price received during the period 1919-20 to 1935-36. The price of \$3.18 per box for the 1935-36 crop of 7,787,000 boxes was the highest received since 1929. Since the crop of 1937-38 is expected to be about in line with production during the last 2 seasons, prices to growers in 1937-38 probably will not differ greatly from those of 1935-36 and 1936-37. With the prospect of a substantial increase in production after 1937-38, however, it would appear that average annual returns per box to growers for the 5-year period following the 1937-38 season will trend downward.

Although prices returned to growers for lemons used in the manufacture of byproducts have been much lower than those received for fresh shipments, increasing quantities of fruit will undoubtedly be utilized in this way in the future. The quantity converted to various byproducts from the small crop of the 1935-36 season amounted to only 4 percent of the entire crop, but nearly one-third of the record-high crop of 10,747,000 boxes in 1934-35 was utilized in this way.

It seems apparent that new types of demand must be stimulated at home and that export markets must be expanded, if prices are to be maintained at a level that will not result in losses to growers.

## LEMONS and LIMES: Production and farm price, 1919-1936

Crop season	LEMONS		LIMES	
	California		Florida	
	Pro- duction	Farm price	Pro- duction	Farm price
	Thousand boxes	Per box (Dollars)	Thousand boxes	Per box (Dollars)
1919-20	4,138	2.00	28	3.45
1920-21	5,641	2.92	26	3.10
1921-22	4,320	3.45	33	2.75
1922-23	3,775	3.30	35	2.90
1923-24	6,432	1.60	40	3.00
1924-25	5,301	3.48	36	3.00
1925-26	7,316	2.11	30	4.00
1926-27	6,967	2.81	12	6.50
1927-28	5,419	3.80	<u>1/</u> --	--
1928-29	7,582	2.60	6	4.50
1929-30	6,109	3.70	8	5.50
1930-31	7,950	2.35	8	5.00
1931-32	7,696	1.95	9	4.50
1932-33	6,704	2.10	10	4.00
1933-34	7,295	2.35	12	3.00
1934-35	10,747	1.41	15	3.50
1935-36	7,737	3.18	12	4.75
1936-37 *	8,102	3.00	20	4.25

1/ Production negligible.

\* Preliminary

LEMONS: Estimated bearing acreage and percentage distribution  
by age groups as of July 1937 1/

State	Bearing acres	Bearing trees	Bearing trees by age groups						
	5 years and over	5 years and over	5	6-10	11-15	16-20	21 and over	5-15 Not in full production	16 & over In full production
			Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
California <u>2/</u>	47,139	4,148	9	17	8	18	48	34	66

1/ Estimates based upon surveys by age groups made in 1936.2/ Lemon trees calculated from acres at the rate of 88 trees per acre.

## LEMONS and LIMES: Tree numbers, U. S. Census enumerations

Crop	State	CENSUS 1920		CENSUS 1925		CENSUS 1930	
		Nonbearing	Bearing	Nonbearing	Bearing	Nonbearing	Bearing
		Trees	Trees	Trees	Trees	Trees	Trees
Lemons	California	781,535	2,884,770	284,000	3,196,469	309,185	2,776,114
Limes	Florida	80,870	115,624	--	--	15,430	42,294

## THE APPLE OUTLOOK FOR 1938

### Summary

Domestic-apple supplies for the current season are the largest in several years, and the Bureau of Agricultural Economics states that apple prices will undoubtedly average substantially lower than those which prevailed for the small crop of 1936.

Improved demand conditions in many foreign countries, trade-agreement concessions on apples, smaller crops in European countries, and lower prices in this country, as compared with last year, are factors that indicate an increase in the volume of apple exports in 1937-38 as compared with last year.

The long-time trend in total apple production in the United States is expected to be downward at a moderate rate. With average growing conditions, annual production probably will approach 140,000,000 bushels by 1945 compared with present production under average growing conditions of about 136,000,000 bushels.

Production of dessert apples in the chief producing countries outside of the United States is on a slightly upward trend. Improvements are being made in cultural practices in most apple-growing countries.

In the Pacific Coast and Rocky Mountain States production in recent years has been fairly stable at about 50,000,000 to 55,000,000 bushels per year. The peak of production has apparently been passed for the region as a whole, and the general trend is expected to be slightly downward.

In the Central States where annual production varies tremendously, increasing production from young orchards probably will about offset decreasing production from old commercial and farm orchards for several years, assuming average growing conditions.

In the Eastern States, the removal of unprofitable farm orchards continues. Although production of some of the more popular varieties may increase for several years, on the whole the number of trees yet to come into bearing is not sufficient to maintain the present number of trees of bearing age.

### Year's Supply Heavy

Following one of the smallest crops on record, the 1937 apple crop is indicated to be the largest in many years. Based on conditions as of October 1 the total United States crop is estimated at 206,700,000 bushels which is more than one-fourth larger than the 1931-35 average production and three-fourths larger than the 1936 small crop. The increase in the 1937 crop over the average is due entirely to heavy production in the Central and Eastern States. Production in the Western States is indicated at about average.

Table 1. - Total production of apples by groups of States and for the United States, 1931-37 <sup>1/</sup>

State groups	1931	1932	1933	1934	1935	1936	1937 <sup>2/</sup>
	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	<u>bus.</u>	<u>bus.</u>	<u>bus.</u>	<u>bus.</u>	<u>bus.</u>	<u>bus.</u>	<u>bus.</u>
Western States <sup>3/</sup>	53,364	54,813	50,171	50,097	53,601	47,753	52,764
Central States <sup>4/</sup>	64,484	25,876	35,175	26,794	48,042	20,807	59,568
Eastern States <sup>5/</sup>	87,555	66,160	63,311	48,828	76,273	48,946	94,384
United States	205,403	146,849	148,657	125,719	177,916	117,506	206,716

- <sup>1/</sup> Revised figures as of June 28, 1937 for 1931-1935, and as of September 1, 1937 for 1936.
- <sup>2/</sup> Indicated production as of October 1, 1937.
- <sup>3/</sup> Includes the States of Mont., Idaho, Wyo., Colo., N. Mex., Ariz., Utah Nev., Wash., Oreg., and Calif.
- <sup>4/</sup> Includes the States of Ohio, Ind., Ill., Mich., Wisc., Minn., Iowa, Mo., S. D., Neb., Kans., Ky., Tenn., Ala., Miss., Ark., La., Okla., and Tex.
- <sup>5/</sup> Includes the 6 New England States, N.Y., N.J., Pa., Del., Md., Va., W. Va., N. C., S. C., and Ga.

In the Western States the 1937 crop is indicated at about 53,000,000 bushels which is only 1 percent above the 1931-35 average but 10 percent larger than the 1936 crop. Prospective production in Washington and Oregon is slightly below average, but the crop in Idaho is slightly above average and that in California is indicated at about 17 percent higher than average.

In the Central States the 1937 apple crop is indicated at 60,000,000 bushels which is almost 3 times as large as last year's small crop and nearly half again as large as the 1931-35 average. All of the principal producing States and most of the other States in the region have large crops in prospect. The five States, Michigan, Ohio, Illinois, Missouri, and Kentucky, probably will produce in 1937 about 43,000,000 bushels compared with 27,000,000 bushels during the 5-year period 1931-35.

Total production in the Eastern States is indicated at more than 94,000,000 bushels. This is nearly twice as large as the small crop of 1936 and more than one-third larger than the average for 1931-35. Exceptionally large crops are in prospect in New York, Pennsylvania, Virginia, and West Virginia, and in all but a few of the remaining Eastern States the indicated production for 1937 is considerably above average.

#### Price Situation Less Favorable This Season

Prices of apples this season to date have averaged considerably lower than those of last year and it is expected that they will continue well below the prices of 1936 during the remainder of the marketing season. Lower average prices than last year are in prospect for growers in all producing areas.



The average farm price of apples declined sharply from 1929 to 1932 largely because of declining consumer buying power. During 1933-36 prices averaged higher than in 1932. The highest annual average for the period - 98 cents a bushel - was received for the small crop of 1936.

Table 2. - Average prices of apples to growers by regions and years 1/

Region	:1925- : 29	: 1930	: 1931	: 1932	: 1933	: 1934	: 1935	: 1936
	:Dolls.	:Dolls.	:Dolls.	:Dolls.	:Dolls.	:Dolls.	:Dolls.	:Dolls.
United States								
Crop year	: 1.20	: 1.02	: 0.65	: 0.60	: 0.70	: 0.88	: 0.71	: 0.98
Atlantic Coast States:								
Crop year	: 1.19	: 1.04	: .65	: .65	: .83	: 1.01	: .79	: 1.10
Central States								
Crop year	: 1.29	: 1.33	: .63	: .71	: .83	: .99	: .74	: 1.14
Western States								
Crop year	: 1.17	: .89	: .70	: .54	: .68	: .73	: .60	: .82

1/ See footnotes 3, 4, and 5 Table 1 for the States included in each region.

With one of the largest crops in prospect for more than a decade average farm prices early in the marketing season of 1937-38 have been considerably lower than prices during the early part of the marketing season of 1936-37. Judging from prices received in terminal markets, prices of all varieties have averaged considerably lower during the first half of September this year than a year ago.

#### Long-time Production Trend Slightly Downward

Because of the tremendous variation in production from year to year it is most difficult to measure accurately the trends in apple production. But some indication of production trends may be obtained from average production for several 5-year periods. Since growing conditions in several of the 5-year periods were considerably below or above average, estimates of production (after correcting for the influence of growing conditions on production) are more representative of trends in the potential producing capacity of orchards than are the actual production figures.

Indications of the future trend in apple production under average growing conditions may be had by an appraisal of the future trends in the number of apple trees of bearing age and the yield per bearing tree.

#### Decrease in Tree Numbers to Continue

On January 1, 1935, there were in the United States about 100,000,000 apple trees of all ages. This number is less than one-half of the number reported in 1910 and about 14 percent less than the number reported in 1930.

Relatively light plantings during the last 10 years indicate that the number of all apple trees has continued to decrease since 1935. Although many old or damaged trees are being replaced, there is at this time no incentive for increasing new plantings on a large scale.

Since an average of about 10 years is required to develop an apple orchard to commercial bearing age it is evident that the trend in tree numbers of bearing age for the next several years will depend on the extent of tree removals rather than on future plantings. Should the downward trend in tree numbers continue at the same rate of decrease as occurred from 1930 to 1935 the number of bearing trees in 1940 will be approximately 77,000,000 and the number in 1945 will be about 71,000,000. The small proportion of trees that were not of bearing age in 1935 indicates the probability, however, of a somewhat larger percentage decrease than occurred from 1930 to 1935. Perhaps a better indicator is the average percentage decrease during the last 10 years. This has amounted to about 2 percent per year, and should this rate of decline continue to prevail the number of apple trees of bearing age in 1940 will be about 74,000,000 and the number in 1945 about 66,000,000.

Table 3. - Total number of apple trees of all ages, of bearing age, and of non-bearing age, by census years for which data are available <sup>1/</sup>

Year	All ages	Bearing age	Not of bearing age	Percentage of bearing age	Percentage not of bearing age
	Millions	Millions	Millions	Percent	Percent
1910	217.1	151.3	65.8	69.7	30.3
1920	151.5	115.3	36.2	76.1	23.9
1925	138.0	103.7	34.3	75.1	24.9
1930	116.3	88.8	27.5	76.4	23.6
1935	100.0	82.5	17.5	82.5	17.5

<sup>1/</sup> U. S. Bureau of the Census figures rounded to one-tenth million.

Many tree removals in the past have been from less profitable commercial and farm orchards, and this has tended to increase the average yield per tree of the orchards remaining. This process of elimination which has been quite substantial in the past will undoubtedly continue, but it is likely that such removals will not be so heavy, relatively, as in the past. It is believed, therefore, that the rate of decline in the number of bearing trees between 1925 and 1935 was somewhat larger than may be expected during the next several years, but because of the relatively small number of non-bearing trees at this time the rate of decline will be somewhat larger than during the last 5 years, 1930-34. In 1935 only about 17.5 percent of the trees were not of bearing age whereas during each of the 3 previous census years about 24 percent of the trees reported were yet to come into bearing.

Long-Time Production Trend

During the last 15 years a marked reduction in the number of trees of bearing age has not been accompanied by any substantial decrease in production because of a decided increase of yield per bearing tree. Thus, in 1935 the total number of trees of bearing age was 28 percent less than the number in 1920 but total production had declined (according to revised figures) only 8 percent. With normal growing conditions during both years the decrease would have been only about 5 percent.

Table 4. - Actual total apple production and estimated production with average growing conditions, yearly averages by 5-year periods 1/

Total production	1912-16	1917-21	1922-26	1927-31	1932-36
	Million bushels	Million bushels	Million bushels	Million bushels	Million bushels
Actual	211.5	155.9	132.6	158.1	143.3
Estimated with average growing conditions	186.8	164.3	151.7	160.1	156.3

1/ Revised figures as of June 28, 1937 for 1919-1936, and as of September 1, 1937 for 1936.

These indicated decreases may be considered as rather negligible in view of the difficulty of accurately measuring trends in production of a commodity that varies so greatly from year to year.

This relatively small decrease in the producing capacity of the apple industry, as measured in terms of production under average growing conditions, is the combined result of the effect of a decrease of 28 percent in the number of bearing trees and an increase of about 35 percent in the yield per bearing tree.

Table 5. - Actual yield of apples per bearing tree, and estimated yield with average growing conditions 1/

Yield per bearing tree	1910	1915 <sup>2/</sup>	1920	1925	1930	1935
	Bushels	Bushels	Bushels	Bushels	Bushels	Bushels
Actual	1.02	1.49	1.35	1.76	1.78	1.74
Estimated with average growing conditions	1.25	1.32	1.41	1.46	1.80	1.90

1/ Obtained by dividing 5-year average total production of apples by number of apple trees of bearing age. The 5-year averages for production are shown in table 4.

2/ To obtain "actual" yield per bearing tree, the number of trees of bearing age were estimated.

The increase in yield per bearing tree of 35 percent in 15 years is the result of an exceptionally large increase in yield between 1925 and 1930 when many plantings in the Northwest were coming into full bearing. At other 5-year intervals since 1910 the increase has averaged only about 5.5 percent, or 1.1 percent a year.

Should the number of bearing trees continue to decrease at the same rate of decline as prevailed during 1930-35, and yield per tree continue to increase at an average rate of 1.1 percent a year, production with average growing conditions will average around 150,000,000 bushels about 1945. However, should tree numbers of bearing age continue to decrease at the rate of decline which prevailed between 1925 and 1935 and yield per bearing tree continue to increase at an average rate of 1.1 percent a year, production about 1945 will average around 140,000,000 bushels with average growing conditions. The United States is now producing about 153,000,000 bushels of apples per year when growing conditions are average, and either of the above indicated decreases in production may be considered to be only moderate.

Obviously the above indications are based upon past performance of the apple industry, and such performance may be modified in the future. In the past, increases in the average yield per bearing tree have been due to an increase of the bearing surface of trees as they increased in age, and to the removal of many low-producing trees. The removal of worthless orchards is expected to continue. Some of these will be replaced but such removals and replacements may have little if any effect upon production during the next 8 years, for many of the old trees are producing little fruit and replacements will not be old enough for production. It is true also that better care of orchards could easily lessen the indicated rate of decline in production. Thus, although it is impossible to evaluate all possible modifying influences on future production, it is now apparent that the general trend of production is slightly downward under average growing conditions.

The large prospective crop of 1937 of more than 206,000,000 bushels is the result of generally favorable growing conditions in the Central and Eastern States. It does not represent any long-time increase in the potential producing capacity of apple orchards. Similar years of heavy production have occurred at various times throughout the history of the apple industry and undoubtedly will continue to occur even though tree numbers should be substantially reduced.

#### Foreign Production Increasing

Production of dessert apples in the chief producing countries outside of the United States is on a slightly upward trend. Production in Canada, the chief competitor of the United States in foreign markets, is definitely upward. Australia and New Zealand have had to curtail apple exports to Europe for several years in order to avoid heavy losses. European countries are also increasing their production and improving the quality of their fruit, most of which comprises apples.



Extensive new plantings have been made in various parts of Germany, Czechoslovakia, Poland, lower Austria, the Danubian countries and, to a certain extent, in the Scandinavian countries. In Central Europe, replantings already far exceed the losses caused by the severe freeze in the winter of 1928-29. Moreover in older fruit districts, the grafting of poor varieties and cider types to the more popular dessert and cooking varieties is increasing.

Another factor that is causing increased competition in foreign markets is the tendency in many countries to prolong the marketing period for home-produced fruits by better cultural and harvesting methods and by the increased use of cold storage. The present tendency in some countries is to sort out some of the best quality fruit for winter storage and to prolong the period of tariff or license protection until February or even March, thus leaving only a brief period in which fruit from the United States can be marketed before competition from the southern hemisphere begins.

A favorable factor has been the increased use of culls and low-quality apples and other fruits in byproducts such as marmalades, jellies, fruit juices, and pectin. Plants have been constructed in a number of countries to manufacture such products. Diversion of low-quality fruit to these byproduct plants will assist in disposing of a part of the crop which would otherwise compete with imports of table fruit.

The greater competition that may be expected in export markets suggests that every attempt should be made by the apple industry of the United States to maintain and improve the quality of apples moving into export.

Although competition is becoming more severe, demand conditions have improved substantially in the past year in a number of the countries that are important outlets for United States apples. Trade barriers have been reduced in a number of countries as a result of the trade-agreement program.

Substantially larger exports of apples probably will be made in the 1937-38 season, July to June, than the 3,735,000 bushels exported in 1936-37. That was the smallest yearly quantity exported in the last 14 years. The apple crops in the United Kingdom and France, the two principal outlets, are considerably smaller than last year. The only important European countries that expect larger apple crops than last year are the Netherlands and Germany. More competition may be expected from Canadian apples this year in European markets, particularly the United Kingdom, because there is a larger apple crop in Canada.

### Regional Long-Time Production Prospects

#### Western States

Apple production in the Western States in recent years has been fairly stable at 50,000,000 to 55,000,000 bushels per year. This group of States produces about 35 percent of the total United States crop, and has been of decided importance in maintaining at a high level production for the country as a whole at a time when tree numbers were declining rapidly.

In the 11 Western States as a whole, a very small percentage of the trees are yet to come into bearing and a large percentage of the acreage has reached full bearing capacity. Yield per bearing tree is 3.5 times what it was in 1910 but during recent years the tendency has been toward only a small increase each year.

Table 6. - Average yearly production of all apples by 5-year periods, number of trees of bearing age, and average yield per bearing tree in the Western States 1/

Item	:1907-11:	:1912-16:	:1917-21:	:1922-26:	:1927-31:	:1932-36:
Production - millions of bushels:	15.1	25.4	42.7	54.4	56.9	51.3
Proportion of U. S. crop percent:	9.8	12.0	27.4	29.8	36.0	35.8
Number of bearing trees <u>2/</u> millions:	12.1	<u>3/</u>	21.2	18.3	13.4	11.6
Proportion of trees of bearing age <u>2/</u> percent:	45.0	<u>3/</u>	87.2	87.2	86.6	87.8
Average yield per bearing tree <u>4/</u> bushels:	1.25	<u>3/</u>	2.01	2.97	4.25	4.42

1/ Revised figures as indicated in footnote 1 Table 4. See footnote 3 Table 1 for the States included.

2/ For census years, 1910, 1920, 1925, 1930, and 1935.

3/ Not available.

4/ Obtained by dividing average total production for each 5-year period by number of trees of bearing age in corresponding census year.

Removal continues of trees of unpopular varieties, of old trees, and of orchards on poor locations. Plantings continue to be confined largely to replacements. Production during the last 5 years has averaged somewhat lower than during the previous 5 years, and in the region as a whole is expected to continue slightly downward for several years.

#### Central States

Yearly production in the Central States varies tremendously because of great variations in weather conditions. The indicated crop of 1937 of more than 59,000,000 bushels is the largest since 1931. During this 7-year period annual production has varied from a low of about 21,000,000 bushels to a high of about 64,500,000 bushels.

Table 7. - Average yearly production of all apples by 5-year periods, number of trees of bearing age, and average yield per bearing tree in the Central States <sup>1/</sup>

Item	:1907-11:	:1912-16:	:1917-21:	:1922-26:	:1927-31:	:1932-36:
Production - millions of bushels:	58.9	87.7	44.8	52.4	36.2	31.3
Proportion of U. S. crop	percent: 38.3	41.5	28.8	28.7	22.9	21.8
Number of bearing trees <sup>2/</sup>	millions: 90.0	<sup>3/</sup>	49.2	40.4	34.6	34.1
Proportion of trees of bearing age <sup>2/</sup>	percent: 73.2	<sup>3/</sup>	74.9	69.4	69.7	79.1
Average yield per bearing tree <sup>4/</sup>	bushels: .65	<sup>3/</sup>	.91	1.30	1.05	.92

<sup>1/</sup> Revised figures as indicated in footnote 1 Table 4. See footnote 4 Table 1 for the States included.

<sup>2/</sup> For census years, 1910, 1920, 1925, 1930, and 1935.

<sup>3/</sup> Not available.

<sup>4/</sup> Obtained by dividing average total production for each 5-year period by number of trees of bearing age in corresponding census year.

Many of the trees in the Central States were planted since the World War, and a relatively large proportion are young. Recent plantings have been light and removals of old trees and non-profitable farm orchards continue. Obviously, production during the next several years will depend on growing conditions and, in years when conditions are generally good, crops of 40,000,000 to 50,000,000 bushels may be expected as compared with crops of 25,000,000 to 30,000,000 bushels when growing conditions are less favorable. With average growing conditions, production for the region as a whole can be maintained, and probably increased, with moderate annual plantings.

### Eastern States

During the 5 years, 1932-36, the Eastern States - which include the New England, the Middle Atlantic, and the South Atlantic States - produced about 60,700,000 bushels of apples per year, or about 7 percent less than average production during the previous 5 years. The indicated crop of 1937 of about 94,400,000 bushels is one of the largest in many years.

Table 8. - Average yearly production of all apples by 5-year periods, number of trees of bearing age, and average yield per bearing tree in the Eastern States 1/

Item	:1907-11:	:1912-16:	:1917-21:	:1922-26:	:1927-31:	:1932-36:
Production - millions of bushels:	79.9	98.4	88.3	75.8	65.0	60.7
Proportion of U. S. crop	percent: 51.9	46.5	43.8	41.5	41.1	42.4
Number of bearing trees <u>2/</u>	millions: 49.2	<u>3/</u>	44.9	45.0	40.9	36.8
Proportion of trees of bearing age <u>2/</u>	percent: 73.2	<u>3/</u>	73.1	76.6	79.8	84.2
Average yield per bearing tree <u>4/</u>	bushels: 1.62	<u>3/</u>	1.62	1.68	1.59	1.65

1/ Revised figures as indicated in footnote 1 Table 4. See footnote 5 Table 1 for the States included.

2/ For census years, 1910, 1920, 1925, 1930, and 1935.

3/ Not available.

4/ Obtained by dividing average total production for each 5-year period by number of trees of bearing age in corresponding census year.

Nearness to large consuming centers gives the Eastern apple grower a decided economic advantage. Consequently, many of the better orchards have received very good care in recent years. On the other hand, generally low-producing commercial orchards have received less-than-average care for several years and farm orchards have continued to decrease in number. The unusual freeze during the winter of 1933-34 also helped to decrease the potential bearing capacity of many orchards of bearing age, especially of the Baldwin variety. This decrease will be at least partially offset by increased production from many young orchards of some of the more popular varieties, especially the McIntosh.

As a result of the freeze in 1933-34 and the severe winter of 1934-35 about 2,500,000 trees in New England and New York were killed. Effects of the winter damage still continue to show up in weakened trees.

Although the winter damage referred to has definitely reduced the producing capacity of the apple industry of New York and the New England States, the probabilities are that the production trend in the Eastern States as a whole will not show a much further decline during the next few years, and only a rather moderate decrease during the next several years.



# THE PEACH OUTLOOK FOR 1938

## Summary

Peach production in the United States in the next 5 years will probably average slightly higher than in 1933-37. Anticipated improvement in demand as compared with the last 5 years, according to the Bureau of Agricultural Economics, is likely to at least offset the effect of larger supplies, and prices are expected to continue generally favorable to growers. In any year when growing conditions are considerably above average, however, marketing difficulties are likely to be experienced.

At this time, when the outlook for production and prices for several years is favorable, the danger of overexpansion of the industry should be recognized. Periods of fairly profitable prices in the past have often stimulated planting so that overproduction and severe losses to growers resulted in some districts. The industry from 5 to 15 years hence may be faced with burdensome market supplies if planting continues at the present or an increased rate over a period of years.

For the United States as a whole and for each of the important peach areas the number of trees in 1935 was near the low point for many years. The upward trend in production is expected chiefly because of the increase in planting in many districts during the last 3 years and the generally good care orchards are receiving.

## Production and Price Outlook Favorable

United States production in 1933-37 averaged approximately 51,000,000 bushels per year. This was about 11 percent less than in the preceding 5 years, and near the average of 1923-27. From 1930 to 1935 the number of trees decreased 15 percent to about 67,000,000. Prices have been sufficiently high during recent years to stimulate considerable planting in many districts, and most orchards are receiving good care. A slightly higher average production during the next 5 years than in 1933-37, is indicated.

The farm price of peaches varies widely among the leading producing areas and from season to season. Various factors affect prices as the size of the crop, variety, quality, distance from market, and general demand conditions.

## Farm price and production of peaches in representative States, 1933-37

State	Cents per bushel					Production (million bushels)				
	1933:	1934:	1935:	1936:	1937 1/	1933:	1934:	1935:	1936:	1937 1/
Georgia	75:	80:	85:	120:	145 :	5.4:	5.5:	5.6:	5.6:	2.7
Illinois	120:	140:	95:	150:	130 :	1.3:	.5:	2.7:	.3:	2.1
Pennsylvania	120:	185:	115:	160:	110 :	1.4:	.6:	2.2:	.8:	2.7
Michigan	175:	175:	85:	150:	110 :	.3:	.6:	2.5:	1.7:	2.7
Colorado	130:	100:	80:	80:	115 :	.6:	1.2:	1.3:	1.3:	1.5
California	48:	62:	64:	65:	80 :	22.1:	20.6:	17.9:	21.5:	22.5
	:	:	:	:	:	:	:	:	:	:
United States	76:	81:	84:	94:	105 :	45.3:	47.7:	54.7:	47.6:	59.4

1/ Preliminary.

As some improvement in average demand conditions is expected in the next 5 years as compared with the last 5-year period, prices, even with moderately larger supplies, are expected to continue generally favorable to growers.

### Outlook Varies Among Regions

Peaches are marketed and distributed chiefly as fresh fruit, except in California, where a large part of the crop is used for canning and drying. Nearly all peaches are harvested and marketed in the 4 months, June to September. The duration of the harvest season in most districts is only a few weeks. In general, peaches are stored only in limited quantities and for short periods. In years when the southern crop is large and the production in areas that market later promises to be light, there is usually some storing of southern peaches for periods of a few weeks. In years when the crop is large in areas that market chiefly in August and September the demand for southern peaches may be decreased somewhat by anticipation of heavy supplies in August and September. Prices in any region are influenced to some extent by production in other regions, particularly those marketing at about the same time. On the whole, however, the outlook must be considered largely on a regional basis in accordance with the method of use, time of ripening, and areas in which the crop is marketed.

### Slight Upward Trend in Production for Market as Fresh Fruit

Most of the peaches grown in the United States, exclusive of California, are used or marketed as fresh fruit. In this entire region the number of trees declined about 23 percent from 1925 to 1935. The rate of planting was very low from 1930 to 1934 but has increased since 1934. Commercial orchards are generally in good condition and it seems probable that average production for the next 5 years in the United States other than California, may slightly exceed the average of 30,000,000 bushels produced in the period 1933-37.

#### Number of trees and production in the United States other than California

Item	: 1920	: 1925	: 1930	: 1935
Trees of bearing age (millions)	: 56.6	: 1/	: 48.7	: 46.0
Trees not of bearing age (millions)	: 20.2	: 1/	: 18.5	: 12.2
Total trees (millions)	: 76.8	: 75.9	: 67.2	: 58.2
Average production (million bushels) 2/	: 29.1	: 32.7	: 33.5	: 30.0

1/ Not available.

2/ Production averages for 1918-22, 1923-27, 1928-32, 1933-37.

The relationship of supply and value over a period of years indicates that the gross farm value in the United States other than California is likely to increase with the size of the crop up to a production of at least 30,000,000 to 35,000,000 bushels. United States production, exclusive of California, has not exceeded 35,000,000 bushels since the record crop of 1931.

The Elberta is the predominant variety grown for shipment to market. Many trees of earlier maturing varieties have been planted in some districts in an effort to extend the market period. Some growers have found a good local demand for other varieties. Selection of varieties and orchard sites are important considerations in planning a peach-growing enterprise.

Planting Increases in South

Eleven southern States produce about half of the peach crop in the United States exclusive of California. Most of the peaches received on the markets from June to early August are from these States. Census figures show that there were fewer peach trees, both of bearing age and not of bearing age, in 1935 than in 1930 in the South. Production in 1933-37 averaged slightly less than in either of the 2 preceding 5-year periods.

Number of trees and production in 11 Southern States (N. C., S. C., Ga., Fla., Tenn., Ala., Miss., Ark., La., Okla., and Texas)

Item	: 1920	: 1925	: 1930	: 1935
Trees of bearing age (millions)	: 27.5	: 1/	: 24.7	: 22.9
Trees not of bearing age (millions)	: 10.2	: 1/	: 7.2	: 5.3
Total trees (millions)	: 37.7	: 38.4	: 31.9	: 28.2
Average production (million bushels) 2/	: 15.3	: 16.9	: 16.0	: 15.7

1/ Not available.

2/ Production averages for 1918-22, 1923-27, 1928-32, 1933-37.

Although the number of trees that had not reached bearing age in the South in 1935 was hardly enough to prevent a further decline in bearing trees, large numbers have been planted in the last 3 seasons. In the 12 months ending in June 1937 about 2,200,000 diseased and abandoned trees were removed from southern orchards, which are now reported to be in generally good condition. Average production in 11 southern States in the next 5 years is likely to show a moderate increase over the 1933-37 average of a little less than 16,000,000 bushels. Indications are that a crop of roughly 18,000,000 bushels in these States will usually result in a higher gross cash income to growers than a smaller crop. Some increase in bearing capacity in the next few years is expected in South Carolina, Georgia, North Carolina, and Alabama. In most of the other southern States not much change is anticipated. Although the outlook for production and prices of southern peaches in the next 5 years is favorable, the danger of overplanting in the next few seasons, and excessive supplies from 5 to 10 years hence, should be recognized.

Slight Upward Trend in Illinois and Nearby States

Illinois and nearby States supply most of the peaches used in the middlewestern markets during August in years when growing conditions in this region are favorable. The number of trees in 7 States in this region declined nearly one-fourth from 1925 to 1935, and have probably reached or passed the low point for this cycle unless severe damage occurs from winter killing or other causes. The trend in production is likely to be slightly upward from the

Number of trees and production in Ind., Ill., Ky., Iowa, Mo., Nebr., and Kans.

Item	: 1920	: 1925	: 1930	: 1935
Trees of bearing age (millions)	: 7.0	: 1/	: 8.1	: 7.8
Trees not of bearing age (millions)	: 3.2	: 1/	: 3.6	: 1.7
Total trees (millions)	: 10.2	: 12.3	: 11.7	: 9.5
Average production (million bushels) 2/	: 2.6	: 3.2	: 3.9	: 3.5

1/ Not available.

2/ Production averages for 1918-22, 1923-27, 1928-32, 1933-37.



average of 3,500,000 bushels in 1933-37. A crop of roughly 5,000,000 bushels in this group of States would usually have a greater value at the farm than a smaller quantity. Seasons of peach-crop failures or low production are frequent in this region. In 3 of the last 10 seasons production has been less than 1,000,000 bushels and in 3 seasons more than 6,000,000 bushels. If the industry in these States were expanded much above the present bearing capacity, low prices to growers would probably be the result in years of good growing conditions.

#### Pennsylvania, Maryland, and Nearby States

Pennsylvania, Maryland, Virginia, West Virginia, New Jersey, and Delaware are the principal source of peach supply for the eastern markets in August. In this group of States there was a pronounced decline in number of trees both of bearing and non-bearing age from 1920 to 1935. The average production of 4,200,000 bushels in 1933-37 was considerably less than in either of the 2 previous 5-year periods. A crop of roughly 5,000,000 to 6,000,000 bushels for the region as a whole would probably have a higher gross farm value than a smaller quantity. This region is subject to considerable variation

Number of trees and production in Pa., Md., Va., W. Va., N. J., and Del.				
Item	: 1920	: 1925	: 1930	: 1935
Trees of bearing age (millions)	: 10.6	: 1/	: 7.4	: 6.5
Trees not of bearing age (millions)	: 3.9	: 1/	: 3.0	: 2.2
Total trees (millions)	: 14.5	: 11.7	: 10.4	: 8.7
Average production (million bushels) 2/	: 4.4	: 5.7	: 5.5	: 4.2

1/ Not available.

2/ Production averages for 1918-22, 1923-27, 1928-32, 1933-37.

in size of crops from year to year. In 2 of the last 10 years production has exceeded 7,000,000 bushels and in 3 years has been less than 4,000,000 bushels. Condition of trees is generally good and planting of new orchards and replacements in the last few years have probably been sufficient to slightly increase the bearing capacity. In Virginia a sharp upward trend in bearing trees and production is expected.

#### Little Change in Production Expected in Great Lakes Region

In States having important peach districts near the Great Lakes there was a considerable decline in number of trees in 1925-35. Planting in this region has increased, particularly in Michigan. A study of orchards in New York State in 1936 indicated that over half of the trees were under 9 years of age. In Michigan and Ohio the production trend will probably be slightly

Number of trees and production in N. Y., Ohio, Mich., Wis., Minn., N. D., and S. D.

Item	: 1920	: 1925	: 1930	: 1935
Trees of bearing age (millions)	: 8.0	: 1/	: 6.1	: 6.2
Trees not of bearing age (millions)	: 2.4	: 1/	: 3.4	: 2.2
Total trees (millions)	: 10.4	: 10.2	: 9.5	: 8.4
Average production (million bushels) 2/	: 3.3	: 3.6	: 4.4	: 3.4

1/ Not available.

2/ Production averages for 1918-22, 1923-27, 1928-32, 1933-37.



## Peaches - 5.

downward for 2 or 3 years, then upward, barring severe tree injury from freezing or other causes. For the group as a whole the average size of the crop in the next 5 years is likely to approximate the 3,400,000 bushel average of 1933-37. Price-supply relationships indicate that a crop of roughly 4,000,000 bushels in these States usually has a higher farm value than a smaller crop. This region, like others in the Northern and Central United States, is subject to wide fluctuations from year to year in the size of the peach crop. In 2 of the last 10 years the crop was less than 2,000,000 bushels, while in 3 years it was above 5,000,000 bushels.

### Peaches in New England

Peaches in New England are produced for local markets in limited quantities. Production will probably be maintained near the level of recent years.

#### Number of trees and production in New England States

Item	: 1930	: 1935	: 1930	: 1935
Trees of bearing age (millions)	: 1.0	: 1/	: .5	: .5
Trees not of bearing age (millions)	: .3	: 1/	: .3	: .2
Total trees (millions)	: 1.3	: .8	: .8	: .7
Average production (million bushels) 2/	: .3	: .4	: .4	: .2

1/ Not available.

2/ Production averages for 1918-22, 1923-27, 1928-32, 1933-37.

### Production Increase Small in Western States Other Than California

In the Western States, other than California, there was only a slight change in the number of peach trees in 1930-35. The number in bearing increased moderately and the number of non-bearing trees decreased. In Washington and Oregon some trees are still showing the effect of the freeze in 1935-36. In Utah there was some damage from cold in 1936-37. Replacement plantings have

#### Number of trees and production in Mont., Idaho, Wy., Colo., N. Mex., Ariz., Utah, Nev., Wash., Oreg.

Item	: 1930	: 1935	: 1930	: 1935
Trees of bearing age (millions)	: 2.5	: 1/	: 1.9	: 2.2
Trees not of bearing age (millions)	: .2	: 1/	: 1.0	: .6
Total trees (millions)	: 2.7	: 2.4	: 2.9	: 2.8
Average production (million bushels) 2/	: 3.2	: 2.9	: 3.3	: 3.0

1/ Not available.

2/ Production averages for 1918-22, 1923-27, 1928-32, 1933-37.

been made generally and some new orchards have been set. A continuation of the upward trend in production in Colorado is probable. For the region as a whole a slightly upward trend in production is indicated for the next 5 years from the 1933-37 average of 3,000,000 bushels. A large part of the crop in most of the States in this group is consumed in nearby markets and a further expansion of the industry may result in marketing difficulties in years of favorable growing conditions.

### Tree Numbers in California May Increase Moderately

The total number of peach trees in California declined from 1925 to 1935. Indications are that the decrease in tree numbers had practically ceased

## Peaches - 6.

in 1936 and that if prices remain favorable tree numbers may increase moderately.

Number of trees and production in California				
Item	: 1920	: 1925	: 1930	: 1935
Trees of bearing age (millions)	: 9.0	: 1/	: 10.2	: 8.1
Trees not of bearing age (millions)	: 1.4	: 1/	: 1.7	: .8
Total trees (millions)	: 10.4	: 13.2	: 11.9	: 8.9
Average production (million bushels) 2/	: 14.9	: 17.6	: 23.8	: 20.9

1/ Not available.

2/ Production averages 1918-22, 1923-27, 1928-32, 1933-37.

Peaches grown in California are of two types, clingstone, used primarily for canning, and freestone, used for drying and fresh consumption. The 1936 California Fruit and Nut Acreage Survey indicates that approximately 17 percent of the total number of trees were not of bearing age. Production of both clingstone and freestone peaches in the next 5 years is expected to average approximately the same or slightly larger than in the last 5 years.

California acreage of clingstone and freestone peaches, 1936			
Item	: Clingstone:	Freestone:	Total
Trees of bearing age (1,000 acres)	: 41.9	: 39.4	: 81.3
Trees not of bearing age (1,000 acres)	: 8.7	: 8.0	: 16.7
Total acres (thousands)	: 50.6	: 47.4	: 98.0
Proportion with trees not of bearing age (percent):	17	: 17	: 17

In California, peaches used commercially for canning in 1932-36 averaged roughly 9,000,000 bushels (216,000 tons), which was approximately 43 percent of total production for the State. Those used for drying averaged about 5,200,000 bushels (125,000 tons) annually, or about 25 percent of the total production. For a number of years preceding 1935, large quantities of California peaches, principally clingstones, were not harvested because of excessive supplies and market conditions.

California peaches are of considerable importance in the middlewestern fresh peach markets, particularly in years when the crop in other leading producing States is light. Shipments of California fresh peaches out of the State averaged about 2,050 cars per year in 1932-36, which was equivalent to approximately 5 percent of California production. Roughly, three-fourths of these out-of-State shipments of fresh peaches were freestone varieties.

Approximately 17 percent of the 1932-36 commercial production of canned peaches and 15 percent of the commercial production of dried peaches were exported. Exports of fresh peaches are of minor importance. Exports of canned, dried, and fresh peaches in terms of fresh fruit averaged about 5 percent of the United States production in 1932-36. Approximately 12 percent of the California production has been exported in various forms.

Peaches - 7.

Pack and exports of California canned and dried peaches

Period or season	Canned pack	Canned exports	Dried pack	Dried exports
	: 1000 cases <sup>1/</sup>	: 1000 cases	: Tons	: Tons
1921-22 to 1925-26 av.	: 7,572	: 1,321	: 23,140	: 3,284
1926-27 to 1930-31 av.	: 12,448	: 1,846	: 23,000	: 3,827
1931-32 to 1935-36 av.	: 8,996	: 1,687	: 22,500	: 3,616
1931-32	: 8,421	: 1,469	: 21,500	: 4,245
1932-33	: 6,438	: 1,733	: 22,200	: 3,825
1933-34	: 10,309	: 1,799	: 23,400	: 3,784
1934-35	: 8,598	: 1,126	: 25,900	: 3,175
1935-36	: 11,216	: 2,307	: 19,500	: 3,049
1936-37 <sup>2/</sup>	: 11,035	: 1,339	: 24,000	: 3,522

<sup>1/</sup> Cases of 24 No. 2-1/2 cans.

<sup>2/</sup> Preliminary.

The principal foreign market for United States canned peaches is the United Kingdom, and for dried peaches the leading export markets are France and Canada. The export demand during the next few years is expected to be as good as, or slightly better than, during the last 5 years.





## THE CHERRY OUTLOOK FOR 1938

### Summary

Indications are that cherry production in the United States, during the next 3 to 5 years, with average growing conditions, will be slightly larger than average production during the past 5 years, states the Bureau of Agricultural Economics. It is expected that the considerable number of trees yet to come into bearing will probably more than offset any normal losses and abandonment of orchards for the next few years.

Farm prices for cherries, after dropping to a decidedly low level in 1932, have been gradually rising in recent years largely because of increased demand and a higher general price level. In view of the present potential productive capacity, however, it is expected that prices to growers in the next few years will not reach the high levels attained during the 1924-29 period.

There was an increase in the United States of about 35 percent in the number of trees of bearing age from 1930 to 1935. About 25 percent of the total number of trees in the entire country were of non-bearing age in 1935 as compared with 36 percent in 1930. New plantings were heavy during the period 1925-30 when prices to growers were at high levels. Large numbers of trees planted during this period have now come into bearing.

The increase in bearing acreage and an upward trend in production during recent years have been greater in the eastern group of States (New York, Pennsylvania, Ohio, Michigan, and Wisconsin) than in the western group (Montana, Idaho, Colorado, Utah, Washington, Oregon, and California). The number of bearing trees in the former group increased 55 percent from 1930 to 1935, compared with an increase of 26 percent in the western States and 43 percent in the 12 States.

From the utilization standpoint, trends in the last few years have been as follows: canned red pitted cherries, sharply upward; canned sweet cherries, slightly downward; brined and frozen cherries sharply upward. Under average conditions it is expected that the trends of all except canned sweet cherries will continue to be slightly upward for the next 2 or 3 years.

### The 12 Important Cherry States

The number of cherry trees in the United States according to the 1935 census was slightly more than 15,000,000 of which about 11,000,000 were in the 12 important commercial producing States. This is the largest number since 1910.

In the 12 States - New York, Pennsylvania, Ohio, Michigan, Wisconsin, Montana, Idaho, Colorado, Utah, Washington, Oregon and California - the number of trees changed only slightly from 1910 to 1920. From 1920 to 1930 the number of trees increased 16 percent and during the period 1930-35 there was an additional increase of 16 percent.

Production trend upward in most States

As reported by the 1935 census the ratio of non-bearing to total number of trees in these 12 States was about 22 percent, or the same as it was about 15 years ago. In 1930, 37 percent of trees had not yet reached bearing age. With the large number of young trees yet to come into bearing the trend of potential production seems to be upward, in all of the States except Colorado, Montana, Idaho, and possibly California. Recent reports indicate that abandonment of commercial orchards since the 1935 census was taken has been relatively small. Since there is a large number of trees yet to come into bearing, production in the 12 States is expected to be well above the 5-year (1928-32) average of 116,700 tons and will continue to increase for a few years unless there is considerable abandonment of orchards from freezing and disease.

Cherry production has fluctuated widely from year to year but the general trend has been upward for a number of years. A peak was reached in 1932 when the estimated production in the 12 important States was 143,300 tons as compared with the 1928-32 average of 116,700 tons (revised figures). From 1933 to 1935 it fluctuated from about 131,000 to 138,000 tons, and dropped below average to 115,000 tons in 1936. Production of both sweet and sour cherries in 1937 (preliminary report) is estimated to be 144,000 tons, slightly more than was produced in 1932 and 23 percent greater than the 5-year average.

Production and average price to growers in 12 States,  
all varieties

	Average						
	1928-32	1932	1933	1934	1935	1936	1937
	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Total Production	116,704	143,340	133,840	131,180	138,040	115,160	144,040
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Average price per:							
ton received by:							
growers	111.86	42.37	55.96	58.91	70.74	76.87	-

The increase in 1937 production over 1936 has resulted almost entirely from high yields in the eastern States where production increased nearly 75 percent over the previous year to 91,500 tons. In the western States the crop was materially damaged by rains in some sections particularly the Pacific Northwest during the harvesting season and only about 52,500 tons were produced as compared with 62,700 tons in 1936.

During the 4-year period 1933-36 available figures indicate that the total United States cherry crops have been utilized approximately as follows: canned, 26 percent; barreled in brine, 11 percent; frozen, 7 percent; used fresh and purchased by brokers for city manufacturers, 56 percent.

Owing to the high yields in the eastern States the 1937 pack of red pitted cherries is estimated to be about 2,341,000 cases (all sizes), which is 9 percent less than the large pack in 1935, but 61 percent greater than the small pack in 1936, and 23 percent more than the 4-year average for



### Cherries-- 3.

1933-36. Figures are not yet available for the 1937 pack of sweet cherries but no doubt the total will be considerably smaller than the 569,800 cases (all sizes) packed in 1936, because of rain damage in the Northwest. The general trend in volume of canned cherries has been upward during the last 10 or more years. This upward trend, however, is due almost entirely to the increase in the pack of red pitted cherries as the trend in volume of canned sweet cherries has been slightly downward in recent years.

Stocks of frozen cherries in storage September 1, totaled 26,853,000 pounds, of which about 2,000,000 pounds were carry-over from the 1936 pack. This indicates that about 25,000,000 pounds were frozen in 1937 as compared with an average of about 20,000,000 pounds in 1936 and 17,000,000 pounds for the 4-year period 1933-36.

#### 1937 pack of brined cherries expected to be large

Figures for 1937 are not yet available on the volume of cherries brined in barrels to be used principally for manufacturing Maraschino-type packs. This industry is largely confined to Oregon, Washington, and California where the Royal Ann variety is used for brining purposes. Some black varieties such as Bing and Lambert are now being barreled in brine and some sour cherries are brined in several of the eastern States. Washington, Oregon, and California produced nearly 124,000 barrels of approximately 250 pounds net in 1936, representing 15,500 tons. This was the largest pack on record and exceeds the previous record pack of 12,000 tons in 1933. It is believed that the volume brined in 1937 will be close to that of last year. Indications are that the volume of Royal Ann cherries for brining will continue to increase slightly for a few years and that the brining of sour cherries in the eastern States will decline somewhat.

#### Eastern Producing States

As most of the sour cherries are produced in the States east of the Rocky Mountains, trends of the industry in the five eastern producing States (New York, Pennsylvania, Ohio, Michigan, and Wisconsin) may be considered as indicative of trends in the sour-cherry industry.

#### Production increase greatest in this region

In this group of States, increases in plantings and the resulting upward trend in production have been greater than for the country as a whole or for the western States. The proportion of trees reaching bearing age in these States has also been greater in the last few years than it has been in the Pacific Coast States. According to the census for 1935, 20 percent of the cherry trees in the eastern States were of non-bearing age as compared with 26 percent in the western States and 25 percent for the country as a whole. Recent reports show that abandonment in commercial orchards has been small which indicates an upward trend in production of sour cherries for the next few years.

Michigan and New York are the two largest cherry-producing States. They produced nearly 61,000 tons in 1937 or about two-thirds of the total crop in the eastern States. Both States have considerable numbers of trees yet to come into bearing.

## Cherries - 4.

Production in 5 eastern States, all varieties								
State	Average	1932	1933	1934	1935	1936	1937	
	1928-32	1932	1933	1934	1935	1936	1937	
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	
New York	18,764	26,390	11,250	20,630	22,910	13,280	21,750	
Sweet	-	3,050	1,690	1,260	2,390	1,670	1,770	
Sour	-	23,340	9,560	19,370	20,520	11,610	19,980	
Pa.	1/ 7,685	9,940	5,000	7,720	9,880	5,120	9,890	
Ohio	1/ 4,185	4,910	4,420	6,070	7,380	1,380	7,340	
Mich.	26,650	31,780	34,760	29,900	30,590	29,890	39,100	
Sweet	-	-	-	1,800	2,510	2,260	2,540	
Sour	-	-	-	28,100	28,080	27,630	36,560	
Wis.	8,224	10,030	11,000	7,760	10,820	2,790	13,500	
Total	63,134	83,050	66,430	72,080	81,580	52,460	91,580	
1/ Short-time average								

Western Producing StatesLarge output of sweet cherries

About 90 percent of the commercial output of sweet cherries is produced in the five far-western States. According to the 1935 census, in the entire group of western States (7 States) 26 percent of the total number of trees were of non-bearing age. However, California and Washington, the largest producing States, had the smallest percentage of non-bearing trees and it is believed that the bearing acreage has about reached its peak. In the remaining States, where there are large numbers of trees yet to come into bearing, it is expected that production will continue to be heavy and may increase slightly for a few years.

Production downward since 1933

Production in the western States has fluctuated considerably during recent years. A peak was reached in 1933 when nearly 67,500 tons were produced. Since then the trend has been downward but in 3 of these years - 1934, 1935, and 1937 - growing conditions were unfavorable and production was abnormally low. Because of excessive rains in the Northwest during the 1937 harvesting season, production totaled only about 52,500 tons as compared with 62,700 tons in 1936 and an average of almost 53,600 tons for 1928-32.

Production in 7 western States, all varieties								
State	Average	1932	1933	1934	1935	1936	1937	
	1928-32	1932	1933	1934	1935	1936	1937	
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	
Mont.	532	690	570	550	500	110	340	
Idaho	3,166	3,280	2,860	2,920	2,950	1,890	1,760	
Colo.	3,332	3,820	1,900	5,230	4,010	700	3,460	
Utah	3,400	3,500	2,280	2,400	2,200	3,400	2,100	
Wash.	13,540	16,500	18,500	18,000	16,000	18,000	13,500	
Oregon	11,220	14,000	16,000	13,000	15,800	15,600	12,400	
Calif.	18,380	18,500	25,300	17,000	15,000	23,000	18,900	
Total	53,570	60,290	67,410	59,100	56,460	62,700	52,460	



Cherries - 5.

Cherry trees: Number and percentage not of bearing age in the Eastern States, Western States, 12 States, and the United States, 1910, 1920, 1930, and 1935.

Item	1910	1920	1930	1935
	Number	Number	Number	Number
<u>5 Eastern States</u>				
Not of bearing age	1,102,106	1,128,204	1,940,939	1,365,543
Of bearing age	3,943,969	4,299,193	3,517,828	5,443,881
Total trees	5,046,075	5,427,397	5,458,767	6,809,424
	Percent	Percent	Percent	Percent
Percentage not bearing	22	21	36	20
	Number	Number	Number	Number
<u>7 Western States</u>				
Not of bearing age	1,391,303	622,339	1,532,127	1,091,896
Of bearing age	1,452,198	2,026,562	2,411,081	3,028,835
Total trees	2,843,501	2,648,901	3,943,208	4,120,731
	Percent	Percent	Percent	Percent
Percentage not bearing	49	23	39	26
	Number	Number	Number	Number
<u>12 States</u>				
Not of bearing age	2,493,409	1,750,543	3,473,067	2,457,439
Of bearing age	5,396,167	6,325,755	5,628,909	8,472,716
Total trees	7,889,576	8,076,298	9,401,976	10,930,155
	Percent	Percent	Percent	Percent
Percentage not bearing	32	22	37	22
	Number	Number	Number	Number
<u>United States</u>				
Not of bearing age	5,621,660	3,694,531	4,615,286	3,746,569
Of bearing age	11,822,044	10,787,751	8,381,472	11,327,435
Total trees	17,443,704	14,482,282	12,996,758	15,074,004
	Percent	Percent	Percent	Percent
Percentage not bearing	32	26	36	25



## THE PEAR OUTLOOK FOR 1938

### Summary

The trend of pear production in the United States is upward, chiefly because of increasing production in the three Pacific Coast States. Although new plantings of pears have almost ceased, there are sufficient young trees to permit the upward trend in production to continue for several years. Orchards in the important commercial pear-producing areas of California, Oregon, Washington, New York, Illinois, and Michigan were given good care in 1936 and very little abandonment took place. Neglect has been general in many other States where pear growing has been relatively unimportant and proved unprofitable.

Prices paid to growers this season will probably fall below those of last year because of the large crop. The total income from the crop, however, may exceed that of 1936-37. Prices paid for the Anjou and Bosc varieties improved the latter part of October and a substantial volume of fruit was sold at higher prices. Prices paid for pears have improved substantially from the low point reached in 1932. Prospects for pears may continue to improve for the next 2 or 3 years, providing demand conditions do not become unfavorable; in years of heavy production, however, considerable difficulty may be experienced in disposing of the crops at prices satisfactory to growers.

Indications point to larger exports of fresh pears in 1937-38 than in the preceding season. Exports of canned and dried pears also may show an increase. European pear crops are smaller than last year and European purchasing power has improved. More competition may be expected in foreign markets during the next few years because of the increasing production of dessert pears in a number of countries and the lengthening of the marketing season by the wider use of cold storage.

### Production Increasing

Larger pear crops may be expected in the United States for a number of years because of the large number of young trees that have not yet reached full bearing capacity. Practically all of the increase in production is taking place in the three Pacific Coast States. With the exception of the East North Central States, production in other parts of the United States is declining.

The total pear crop in this country has increased since the turn of the century from 6,625,000 bushels in 1899 to an all-time record of 29,822,000 bushels in 1937. The increase has been at a slower rate in the last decade than in the decade preceding it. About two-thirds of the pear crop is produced in the Pacific Coast States. Around 74 percent of the pears produced on the Pacific Coast in the 5-year period, 1932-36, have been Bartlett pears. In California the proportion runs somewhat higher, but less than half of the Oregon production comprises Bartlett pears. Plantings in the latter State have run heavily to winter varieties such as Anjou and Bosc. The Kieffer and Bartlett varieties lead in most other States.

Pears: Total production, and production,  
by principal states and regions

Year	Total	Middle Atlantic States 1/	East North Central States 2/	Oregon and Wash- ington	Cali- fornia	Others
	1,000	1,000	1,000	1,000	1,000	1,000
	bushels	bushels	bushels	bushels	bushels	bushels
1899 3/	6,625	2,185	782	190	1,913	1,555
1909 3/	8,841	2,185	1,623	685	1,928	2,420
1919	14,891	2,653	1,046	2,490	4,625	4,077
1922-26	20,305	2,945	1,718	4,318	6,692	4,632
1927-31	23,213	1,803	1,854	6,230	9,087	4,259
1932-36	25,438	2,117	2,582	7,876	9,084	3,780
1936	26,956	1,887	2,194	9,160	9,792	3,923
1937 4/	29,822	2,060	3,770	9,118	10,099	4,775

1/ New York, New Jersey, Pennsylvania. 2/ Ohio, Indiana, Illinois,  
Michigan, and Wisconsin. 3/ Census reports. 4/ Preliminary.

Pears: Production of Bartlett and other pears in  
California, Oregon, and Washington

Year	California	Oregon	Washington	Total (3 States)
	1,000 bus.	1,000 bus.	1,000 bus.	1,000 bus.
Average -				
1927-31				
Bartlett .....	7,919	1,271	2,629	11,819
Others .....	1,148	1,445	885	3,478
Total .....	9,067	2,716	3,514	15,297
1932-36				
Bartlett .....	7,552	1,383	3,577	12,512
Others .....	1,532	1,722	1,194	4,448
Total .....	9,084	3,105	4,771	16,960

The pear crop is utilized in three ways - fresh, dried, and canned. For the United States as a whole about 70 percent of the crop is consumed fresh and 30 percent is canned and dried. Most of the canneries are in the Pacific Coast States and all of the drying takes place in California. In the 5-year period, 1932-36, the pear crop harvested on the Pacific Coast was utilized about as follows: 60 percent was sold for fresh consumption, 31 percent canned and 9 percent dried.

Canned-pear production in 1937 is expected to fall somewhat short of the 5,300,000 cases packed on the Pacific Coast in 1936; but with a larger canned salad and cocktail pack expected, the total quantity of pears used for canning will probably not be much less than the 160,000



short tons (6,700,000 bushels) used for this purpose in 1936. A record quantity of 8,200 short tons of dried pears were produced in 1936 but low prices and a large carry-over point to a much smaller pack this year. Preliminary estimates indicate an output of less than half of last year's pack.

### Number of Pear Trees Declining

The number of bearing trees in the United States has decreased considerably during the last decade but the number of bearing pear trees in 1935 was only slightly smaller than in 1900. Of a total of 19,436,000 pear trees in 1935, 86 percent were in bearing compared with 21,271,000 trees in 1930, of which 75 percent were in bearing. The commercial pear industry of the United States has shifted from the East to the West in the last 25 years. Only about 16 percent of the pear trees in the country were located in the Pacific Coast States in 1910 whereas about one-half of the trees and 69 percent of the crop was centered in these States in 1935.

Pear trees: Total bearing and nonbearing trees by census years, and the percentage of trees of bearing and nonbearing age

Year	All ages	Bearing age	Not of bearing age	Percentage of bear- ing age	Percentage not of bearing age
	1,000 trees	1,000 trees	1,000 trees	Percent	Percent
1900 .....	1/	17,716	---	---	---
1910 .....	23,975	15,171	8,804	63.3	36.7
1920 .....	20,700	14,648	6,052	70.8	29.2
1925 .....	23,198	2/	---	---	---
1930 .....	21,271	16,043	5,228	75.4	24.6
1935 .....	19,436	16,695	2,741	85.9	14.1

Compiled from Census Reports rounded to thousands. 1/ Only trees of bearing age were supposed to be tabulated but probably some nonbearing trees were included. 2/ Only the total number of trees were reported.

During 1937 commercial pear orchards have been generally well cared for in the important producing States such as the Pacific Coast States, New York, Illinois, and Michigan, but they have been neglected in the Shenandoah-Cumberland Valley, Delaware, Arkansas, Oklahoma and Colorado. Considerable abandonment has taken place in this second group of States. Losses from freezes and drought in the last season were small in all regions. Tree removals in most sections were light, even in the noncommercial pear States, and no shortage of nursery stock has been reported except from Michigan where some shortage has occurred.

Planting of pear trees in California has apparently declined steadily during the last 8 years. Latest estimates place the area in pears at around 60,000 acres, about 90 percent of which is in bearing. It is estimated that two-thirds of the trees are less than 25 years old

and consequently have not yet reached full bearing. This indicates that production may be expected to increase for a number of years. About four-fifths of the present plantings are Bartlett pears.

Trend of Prices Has Been Upward; Lower This Year

Although prices for pears will probably be somewhat lower in the United States this year than last, the trend of pear prices has been upward since 1932 when the price to growers reached a low point of 39 cents a bushel. The 1936 average was 67 cents a bushel. Prices received by growers in the Eastern States have generally been consistently higher since 1929 than those received by growers in the Western States, largely because the producing regions in the East are closer to consuming markets. Prices paid by canneries in California reached a low of \$14 a short ton in 1932 but have been higher since that year. Canneries are paying around \$25 a ton this season for no. 1 canning Bartletts, or about the same as last year.

Pears: Average prices to growers by principal States and year

Region	: 1925-:	:	:	:	:	:	:	:	:
	: 1929 :	: 1930 :	: 1931 :	: 1932 :	: 1933 :	: 1934 :	: 1935 :	: 1936 :	: 1937 :
	: 1/ :	:	:	:	:	:	:	:	:
<u>ALL USES</u>	:Dolls.:	:Dolls.:	:Dolls.:	:Dolls.:	:Dolls.:	:Dolls.:	:Dolls.:	:Dolls.:	:Dolls.:
	: per :	: per :	: per :	: per :	: per :	: per :	: per :	: per :	: per :
	:bushel:	:bushel:	:bushel:	:bushel:	:bushel:	:bushel:	:bushel:	:bushel:	:bushel:
United States:	:	:	:	:	:	:	:	:	:
Crop year ...	1.21	0.75	0.60	0.39	0.55	0.70	0.63	0.67	:
Sept. 15 ...	1.43	0.86	0.78	0.55	0.60	0.78	0.74	0.91	0.86
New York 2/ :	:	:	:	:	:	:	:	:	:
Crop year ...	1.52	0.90	0.90	0.46	0.85	0.85	0.90	0.60	:
Sept. 15 ...	1.57	0.95	1.00	0.46	0.95	1.00	1.10	1.05	1.10
Ill. & Mich. :	:	:	:	:	:	:	:	:	:
Crop year ...	1.03	1.00	0.55	0.60	0.75	0.60	0.60	0.77	:
Sept. 15 ...	1.27	1.10	0.70	0.62	1.00	0.77	0.77	0.92	0.77
Ore. & Wash. :	:	:	:	:	:	:	:	:	:
Crop year ...	1.25	0.75	0.60	0.35	0.42	0.60	0.52	0.65	:
Sept. 15 ...	1.36	0.67	0.65	0.41	0.50	0.67	0.57	0.82	1.00
California :	:	:	:	:	:	:	:	:	:
Crop year ...	1.19	0.55	0.58	0.50	0.51	0.77	0.68	0.63	:
Sept. 15 ...	1.49	0.70	0.80	0.60	0.50	0.80	0.80	0.95	0.65
	:	:	:	:	:	:	:	:	:
	:Sh.ton:	:Sh.ton:	:Sh.ton:	:Sh.ton:	:Sh.ton:	:Sh.ton:	:Sh.ton:	:Sh.ton:	:Sh.ton.
For canning :	\$54 :	\$30 :	\$20 :	\$14 :	\$17 :	\$35 :	\$28.50 :	\$25 :	\$25

1/ Before 1926 prices as of November 15. 2/ Of the Middle Atlantic States New York, Pennsylvania and New Jersey, prices in New York state were considered the most significant.

### Marketing Control

Before 1934, growers of Bartlett pears in California had attempted to control the size of pears shipped in interstate commerce by voluntary agreements. In 1934, proration of shipments was added to the voluntary program. A formal marketing-agreement program with the U.S. Department of Agriculture was in operation in 1935 and again in 1936.

The effect of the marketing agreement on Bartlett pears in California and of the diversion program for California winter pears and of purchases of Bartlett pears for relief purposes in the 1936-37 season was to increase the prices received by growers. The marketing agreement for Bartlett pears has continued in effect through the 1937 season and purchases were made for relief distribution. Prices received for pears for consumption as fresh fruit during the current season have been higher than they would have been in the absence of the marketing agreement. Prices to growers for canning Bartletts would have dropped below the season price received, if these programs had not been in effect. The marketing agreement on Bartlett pears terminates at the end of the 1937 season. Whether another agreement for orderly marketing of fresh shipments will be adopted is not known at present.

A diversion program for winter pears produced in California, Oregon, and Washington for the 1937-38 marketing season went into effect on October 16. Payments of 50 cents per bushel will be made on all shipments of Anjou, Bosc, Comice, and Winter Nelis pears which are made to non-normal markets in the United States and designated foreign countries to which winter pears heretofore have not been shipped in quantity. It is believed that new markets for winter pears may be developed as a result of this assistance and, at the same time, the reduction in the quantity of winter pears going to normal markets will result in better prices in these markets than otherwise would be received. The diversion programs are not continuous but are given consideration each year. Purchases of surplus pears for relief purposes are made as the situation requires. Should these programs be discontinued, some decrease in prices of pears to growers on the Pacific Coast may be expected. These current and prospective marketing programs should be taken into account, in making comparisons of recent seasons with those of earlier seasons, and in considering the outlook for pears.

### Export Situation

Slightly less than one-fifth of the total pear crop of the United States has been exported in one form or another in the last 5 years. About half of the exports comprised fresh pears and the other half canned and dried pears. Export markets take almost one-sixth of the pears used for fresh consumption over one-third of the canned pear production, and about four-fifths of the dried-pear output.

The 2,626,000 bushels of fresh pears exported in the 1936-37 season were just short of the record movement of 2,693,000 bushels in 1930-31. Fresh pears are exported to many countries but the United Kingdom and Canada are the primary markets. France is the next most important outlet, followed by Sweden, the Netherlands, and Brazil.



Exports of canned pears in 1936-37 were somewhat smaller than during the previous year, amounting to 1,338,000 cases. The bulk of the canned pears go to the United Kingdom but small quantities are exported to many other countries. Dried pears exported in 1936-37 totaled 3,675 short tons - almost as much as the record movement of the previous season. France, the Netherlands, Sweden, United Kingdom, and Canada are the principal markets for dried pears. A considerable quantity of pears are also exported in the form of canned- and dried-fruit mixtures.

Indications are that exports of fresh pears will be somewhat larger in the 1937-38 season than last year but exports of canned and dried pears will probably be no larger than last year. Supplies of fresh, canned, and dried pears in the United States are large whereas European pear crops, at least in the chief importing countries, are smaller than last year. In addition, purchasing power is somewhat better in most European importing countries.

The increasing pear production in Canada as well as in a number of European countries will result in somewhat greater competition during the fall season in the next few years just as the larger production in South Africa, Argentina, Australia, and New Zealand has resulted in much greater competition for fresh pears in export markets during the winter months and at the end of the season. New plantings are taking place in Germany, Czechoslovakia, Poland, lower Austria, and the Danubian countries and, to a certain extent, in the Scandinavian countries. In some countries financial encouragement is given by the Governments. Another factor that is causing increased competition for American pears in foreign markets is the increased use of cold storage. A favorable factor is the increasing utilization of low-quality fruit in byproducts. Diversion of low-quality fruit to byproducts reduces the competition of such fruit with imported American pears. Chief competition for canned pears is from Australia. Production in Australia doubled between 1930 and 1936, the pack in the latter year being around 800,000 cases, of which 300,000 cases were exported. Dried pears are produced in both South Africa and Australia but the combined production usually totals less than 500 short tons. Production in South Africa appears to be declining and there is no indication that production in Australia is likely to increase rapidly.

Reductions in trade barriers as a result of the Trade Agreements Act of June 12, 1934, have improved the export outlook for pears. Concessions have been obtained on fresh, dried, and canned pears in most of the trade agreements signed to date. Although most agreements have been in effect too short a time to allow definite conclusions to be drawn, it is significant that fresh-pear exports to the Netherlands, France, Belgium, Sweden, and Canada, all of which made worth-while concessions on fresh pears, have shown increases since the agreements became effective. The same tendency is apparent in the case of dried pears. There has been a substantial increase in the exports of canned pears to Finland, Cuba, Honduras, Nicaragua, and Colombia, all of which granted duty reductions on canned pears.



Pears: Production and exports of fresh, canned, and dried pears  
and the proportion exported

Season	United States pear production	Export pears all forms of fresh pears 1/	Pro-portion crop exported	United States pears used fresh 2/	Exports fresh pears	Pro-portion fresh crop exported
Average -	1,000 bushels	1,000 bushels	Percent	1,000 bushels	1,000 bushels	Percent
1926-27 -						
1930-31 ...	23,190	3,307	14	18,623	1,617	9
1931-32 -						
1935-36 ...	25,083	4,727	19	19,782	2,186	11
Annually -						
1931-32 .....	25,083	4,279	17	20,451	1,814	9
1932-33 .....	23,974	4,616	19	19,586	2,400	12
1933-34 .....	23,526	5,038	21	17,349	2,220	13
1934-35 .....	27,436	4,362	16	20,420	2,013	10
1935-36 .....	25,299	5,336	21	19,023	2,483	13
1936-37 .....	26,956	5,045	19	19,057	2,626	14
1937-38 3/...	29,822					
	Pacific Coast canned pear pack	Exports of canned pears	Pro-portion pack exported	California dried pear production	Exports dried pears	Pro-portion production exported
Average -	1,000 cases	1,000 cases	Percent	Short tons	Short tons	Percent
1926-27 -						
1930-31 ...	3,687	1,322	36	4,400	2,386	54
1931-32 -						
1935-36 ...	4,185	1,458	35	5,580	3,399	61
Annually -						
1931-32 .....	3,652	1,431	39	4,400	3,039	69
1932-33 .....	3,088	1,215	39	5,500	3,129	57
1933-34 .....	4,377	1,568	36	7,000	4,204	60
1934-35 .....	5,536	1,428	26	4,900	2,843	58
1935-36 .....	4,270	1,646	39	6,100	3,780	62
1936-37 .....	5,300	1,338	25	8,200	3,675	45
1937-38 3/...	4,000			4,000		

Compiled from official and trade sources.

1/ Includes fresh, dried, and canned pears and pears in canned-salad and dried-compote mixes.

2/ Total production minus the portion canned and dried.

3/ Preliminary estimate.

## Pears: Exports in all forms

Season	Exports					
	Fresh	Canned	Canned	Dried	Dried	Total
	pears	pears	pears	pears	pears	Terms
			in salad	pears	in compote	fresh fruit
			<u>1/</u>		<u>2/</u>	<u>3/</u>
	1,000 bushels	1,000 cases	1,000 cases	Short tons	Short tons	1,000 bushels
<u>Average -</u>						
1926-27 -1930-31 .....	1,617	1,322	---	2,386	---	3,307
1931-32 -1935-36 .....	2,186	1,458	178	3,399	1,125	4,727
<u>Annually -</u>						
1931-32 .....	1,814	1,431	167	3,039	1,297	4,279
1932-33 .....	2,400	1,215	140	3,129	1,176	4,616
1933-34 .....	2,220	1,568	210	4,204	996	5,038
1934-35 .....	2,013	1,428	162	2,843	950	4,362
1935-36 .....	2,483	1,646	210	3,780	1,206	5,336
1936-37 .....	2,626	1,338	198	3,675	742	5,045

1/ Pear portion only; about 26 percent considered as canned pears.

2/ Pear portion only; about one-sixth considered as dried pears.

3/ canned pears were converted to fresh pears at one case of no. 2 $\frac{1}{2}$ 's equals one bushel and dried pears at 1 pound dried equals 5 pounds fresh.

## THE GRAPE OUTLOOK FOR 1938

### Summary

Average production of grapes in the United States during the next few years, the Bureau of Agricultural Economics points out in its annual outlook, is likely to be slightly larger than the 1932-36 average of 2,100,000 tons, but considerably smaller than the near-record crop of 1937. If consumer buying power during this period remains near present levels, such crops could probably be disposed of at prices a little higher on the average than are being received for this year's extremely large crop.

Preliminary estimates indicate that the 1938 bearing acreage of grapes in California will be about 487,000 acres, an increase of nearly 19,000 acres over that of 1936. The 1938 bearing acreage is likely to be maintained and perhaps increased slightly during the next few years, since the relatively good prices this season, considering the very large crop, are expected to encourage good vineyard care. With average yields, this acreage would produce approximately 1,875,000 tons of grapes.

Plantings of raisin varieties have been heavier during the last few years than plantings of either wine or table varieties, and some increase has occurred in the bearing acreage of raisin grapes, particularly Thompson Seedless. A preliminary estimate places the 1938 bearing acreage of raisin varieties at about 238,000 acres, compared with 228,000 acres in 1936, and further increases may occur during the next few years. With average yields, annual production of raisin varieties during the next few years probably would be about 1,100,000 tons.

A preliminary estimate indicates that the bearing acreage of California table grapes in 1938 will be about 80,000 acres, compared with about 78,000 acres in 1936, and this acreage will likely be maintained during the next few years. Production on this acreage with average yields would be about 312,000 tons.

The 1938 bearing acreage of California wine grapes is tentatively set at a little more than 169,000 acres, an increase of more than 6,000 acres over the 1936 figure. This bearing acreage probably will be maintained during the next few years and some further increases may occur. Annual production with average yields on this acreage would amount to about 475,000 tons.

There has been no pronounced trend in production of grapes in the principal producing regions outside California. Production in these regions during the next few years will probably average near the 1932-36 average of 267,000 tons, although bearing acreage is likely to decline slightly. Reports indicate that plantings in all eastern regions are light.

### California Raisin Varieties

The present bearing acreage of raisin varieties is indicated to be slightly in excess of 234,000 acres, an increase of more than 6,000 acres over 1936. A preliminary estimate sets the 1938 bearing acreage at about 238,000 acres, and it seems likely that some further increases may occur during the next few years.



Average yields on this acreage would produce crops of about 1,100,000 tons. If domestic and foreign demand for raisins were not greatly different from present levels, crops of this size could be disposed of at prices as high or perhaps slightly higher than those being received for the very large 1937 crop.

In 1936 the non-bearing acreage of raisin varieties represented a much larger proportion of the total acreage of raisin varieties than for any year in the last decade. After reaching a low point in 1929 and 1930, plantings of raisin varieties increased during the next few years, reaching a peak in 1934. Plantings in 1935, however, were a fourth smaller than in 1934, and in 1936 the plantings were only a little more than half as great as in 1935. Of the 15,540 acres of non-bearing vines standing in 1936, about 47 percent were planted in 1934, 35 percent in 1935, and 18 percent in 1936. Most of the 1934 plantings were in bearing by 1937 and the vines planted in 1935 and 1936 will come into bearing during the next 2 or 3 years. Some vine removals probably will partially offset these additions to bearing acreage, but it is expected that the relatively good prices received by growers for raisin varieties in 1936 and 1937 will encourage good vineyard care and the maintenance of bearing acreage.

The Thompson Seedless (Sultanina) is the most important raisin variety, and has constituted the bulk of the raisin grape plantings in recent years. In 1936 this variety comprised approximately 65 percent of the bearing acreage of raisin varieties and 87 percent of the non-bearing. The bearing acreage of the Muscat variety was about 28 percent of the total bearing acreage of raisin varieties in 1936, but plantings of this variety have not been very great in recent years, and the non-bearing acreage in 1936 was only slightly more than 6 percent of the non-bearing acreage of all raisin varieties.

It seems probable that the annual utilization of dried raisins during the next few years will average at least 225,000 tons (equivalent of about 890,000 tons of fresh grapes), with prices to growers probably averaging at least as high as those of the current season. The pack of raisins from the large 1937 crop will probably be in excess of 250,000 tons, however, and there is a possibility of a relatively large carry-over of raisins at the end of the 1937-38 season. Domestic demand during the 1937-38 marketing season is expected to be about as good as during the 1936-37 season, and foreign demand for California raisins is expected to be somewhat better than that of last year. Foreign production of raisins in 1937 is expected to be about 10 percent less than 1936 production; present stocks of raisins in foreign markets are indicated to be rather small; and improvement is noted in the general level of demand in the United Kingdom and other countries which import our raisins. These factors are encouraging to exports during the current marketing season, but existing import duties and restrictions handicap California raisins in competition with raisins from other countries.

During the last decade Thompson Seedless grapes have become very popular for fresh table use, and during the 3 years 1933-35 constituted 29 percent of the total grapes consumed as fresh table stock. Rather large quantities of Thompsons have also been used in recent years for wine and brandy. The Muscat variety is being used in increasing quantities for making wine and brandy, and is also gaining favor as a table grape. It is probable, therefore, that such quantities of raisin grapes as are not utilized for raisins during the next few years can be disposed of readily for table and juice purposes.



### California Table Varieties

The present bearing acreage of California table varieties is probably about 79 thousand acres. Preliminary estimates indicate that the bearing acreage in 1938 will be about 80,000 acres, which acreage is likely to be maintained during the next few years. On this acreage, average yields would produce an annual crop of table varieties of about 312,000 tons. If consumer buying power remains near the average for the past season, an average of somewhat more than 300,000 tons of California grapes probably could be disposed of during each of the next few years for fresh table use, at prices slightly higher than are being received this season. It is probable, however, that raisin varieties (Thompson Seedless and Muscat) would constitute at least 30 percent of the grapes so used, and approximately one-third of the annual production of table varieties would have to be used for juice purposes.

Plantings of table varieties during the last few years have averaged only slightly more than plantings in the several years preceding, and the non-bearing acreage in 1936 was only 4.9 percent of the total acreage of table varieties. Of the 3,800 acres of non-bearing table varieties in 1936, approximately 34 percent were planted in 1934, 40 percent in 1935 and 25 percent in 1936. Most of the 1934 plantings are now in bearing, and the new vines set out in 1935 and 1936 will come into bearing during the next few years. In view of the relatively good prices received by growers in 1936 and 1937 it is expected that there will be few vine removals during the next few years and growers will tend to maintain bearing acreage.

A larger proportion of table-grape plantings in recent years has been of the Emperor variety than of any other single variety. In 1936 the non-bearing acreage of this variety was about 38 percent of the total non-bearing acreage of all table varieties. The Red Malaga and Ribier each constituted about 14 percent of the 1936 non-bearing acreage. The Tokay variety constitutes a larger proportion of the total of table varieties (about one-third in 1936), but recent plantings of this variety have not kept pace with the others mentioned above.

### California Wine Varieties

At present there are slightly more than 166,000 bearing acres of wine grapes in California, an increase of almost 4,000 acres over 1936. Preliminary estimates place the 1938 bearing acreage at more than 169,000 acres, and this acreage is likely to be maintained or perhaps increased slightly during the next 2 or 3 years. With average yields, this acreage would produce crops of wine grapes of approximately 475 thousand tons. If the demand for wine and brandy remains near present levels, and with average crops of other varieties, such crops could be disposed of at prices as high or perhaps slightly higher than are being received this season.

Plantings of wine varieties were greater in 1934 and 1935 than in the preceding 2 years, but in 1936 plantings were very small. Of the 9,200 acres of non-bearing wine varieties standing in 1936, about 47 percent were planted in 1934, 37 percent in 1935, and 9 percent in 1936. Most of the vines planted in 1934 are probably in bearing at present, and the vines set out in 1935 and 1936 will come into bearing during the next few years. It is expected that vine removals this year and next will be at a minimum because of the relatively good

prices received in 1936 and 1937. Consequently, even though plantings in 1935 were not particularly heavy and in 1936 were very light, it seems probable that bearing acreage will not decline during the next few years.

Plantings in recent years of the Zinfandel variety (which variety constitutes almost one-third of the total bearing acreage of wine grapes) have far exceeded plantings of any other single wine variety. In 1936 the non-bearing acreage of Zinfandels represented nearly one-fourth of the total non-bearing acreage of all wine varieties.

The Golden Chassellas (Palomino) variety, which accounted for only 1 percent of the total bearing acreage of wine grapes in 1936, has been planted rather heavily during the last few years, and the non-bearing acreage of this variety in 1936 was 12 percent of the total non-bearing acreage of wine varieties. The Carignane and Alicante Bouschet varieties each constituted nearly one-fifth of the total bearing acreage of wine grapes in 1936. Plantings of Alicante have been very light for a number of years, but plantings of Carignane have been much heavier, and in 1936 the Carignane variety represented about 12 percent of the total non-bearing acreage of wine varieties.

The consumption of commercial wine has followed a sharply upward trend since repeal of prohibition in 1933. Tax-paid withdrawals of all wine during the 6 months, July-December 1936, were about one-third greater than for the like period of 1935, and preliminary indications are that sales of wine in the first few months of 1937 were at least one-fifth greater than for the same months of 1936. The continued increase in sales of wine, in the face of advancing wine prices, is an encouraging factor in the outlook for grapes, but should not necessarily be construed as an indication of material increase in the demand for wine varieties. As has been indicated elsewhere, rather large quantities of raisin and table varieties, primarily Thompsons, Muscats, and Tokays, have been used for wine and brandy in recent years, and indications are that, with average crops, during the next few years in the neighborhood of 225 thousand tons of these varieties would probably be available each year for juice purposes. A further consideration in the outlook for wine varieties is the downward trend evident in the utilization of wine grapes for making homemade wine. The reduction in the demand for grapes for this purpose, since repeal of the Prohibition Amendment, has offset to a considerable extent the increased demand on the part of commercial wineries. Some further decrease in the demand for grapes for home winemaking during the next few years seems probable.

Imports of foreign wine during the 1936-37 fiscal year totaled about 4 million gallons, and were about 45 percent larger than in either of the 2 preceding years. In comparison with the total wine consumed, however, imports are still very small, comprising only about 6 percent of the total in 1936-37. Moreover, most of the wine imported is a very high-priced product, and does not compete directly with the bulk of the domestic wine.

Grapes in Other States

There has been no pronounced trend in production of grapes in the principal producing regions outside California, although crops fluctuate rather widely from year to year. Production of grapes outside California during the next few years will probably average somewhere near the 1932-36 average of 267,000 tons. In recent years an average of approximately 10 percent of the eastern grape crop has been used by commercial concerns for making wine and about the same percentage for unfermented grape juice. Allowing for small quantities used by commercial preserving companies, it appears that in the neighborhood of three-fourths of the total grape crop in the other States, excluding California, is ordinarily used in private homes for fresh use and preserving. It seems probable that a somewhat similar utilization of the eastern grape crop will occur during the next few years, and if demand is maintained near present levels, average crops will probably bring slightly higher prices than are being received in 1937.

Annual estimates of grape acreage in eastern States are not available, and it is rather difficult to ascertain recent trends in the various States. Census figures on vine numbers indicate, however, that there was a decrease in bearing and non-bearing acreage in New York, the principal producing State, excluding California, from 1930 to 1935. In Michigan and Ohio slight increases in bearing and non-bearing acreage appear to have occurred between these two periods, but in Missouri bearing acreage has increased slightly, whereas non-bearing has declined. Reports from these regions indicate very few plantings, and it seems probable that bearing acreage may decline slightly during the next few years.

Grapes: Production by States, average 1927-31, average 1932-36, annual 1932-37

State and variety	Av. 1927-31	Av. 1932-36	1932	1933	1934	1935	1936	1937 1/	
									P.ct. of Actual: 1932-36 av.
	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
	tons	tons	tons	tons	tons	tons	tons	tons	Percent
Calif.all	2,020	1,839	1,926	1,660	1,700	2,194	1,714	2,314	125.8
Table	379	326	317	270	346	375	324	380	6.6
Wine	435	465	388	420	476	571	472	559	20.2
Raisin	1,206	1,047	1,221	970	878	1,248	918	1,375	31.3
All States :									
excl. Calif.	267	267	305	279	258	294	202	312	117.2
N. Y.	79	69	77	75	61	81	49	88	127.5
Mich.	62	60	76	62	64	58	39	63	105.0
Ohio	24	30	34	30	26	34	26	34	113.3
Pa.	23	20	23	18	19	25	16	25	125.0
Mo.	9	10	11	11	9	11	6	12	120.0
Ark.	9	10	14	13	10	8	7	13	130.0
Other States :									
States	61	69	70	70	69	77	59	78	113.0
U.S. total :	2,287	2,106	2,231	1,939	1,958	2,488	1,916	2,627	124.7

1/ Indicated October 1, 1937.



Grapes, California: Utilization of harvested production of all varieties,  
1927-36

Year	: Harvested : : production :	: Dried : : 1/ :	: Table : : stock :	: Crushed : : by : : commercial : : wineries :	: Otherwise : : used as : : juice : : stock 2/ :	: Canned
	: Short : : tons :	: Short tons : : fresh basis :	: Short : : tons :	: Short : : tons :	: Short : : tons :	: Short : : tons :
1927	: 2,307,400	: 1,104,000	: 383,100	: 75,000	: 742,900	: 2,400
1928	: 2,213,000	: 1,008,000	: 405,400	: 103,000	: 695,000	: 1,600
1929	: 1,827,000	: 824,000	: 320,200	: 51,000	: 629,500	: 2,300
1930	: 1,748,000	: 731,000	: 316,400	: 74,100	: 625,200	: 1,300
1931	: 1,310,000	: 640,000	: 235,400	: 34,600	: 399,700	: 300
1932	: 1,772,000	: 1,012,000	: 230,400	: 99,000	: 430,100	: 500
1933	: 1,657,000	: 756,000	: 201,230	: 444,000	: 254,800	: 970
1934	: 1,700,000	: 679,200	: 263,400	: 530,000	: 225,200	: 2,200
1935	: 2,194,000	: 808,500	: 252,500	: 887,000	: 243,600	: 2,400
1936	: 1,714,000	: 728,000	: 289,800	: 494,000	: 199,000	: 3,200
1937 3/	: 2,314,000					

Data taken from reports of the California Cooperative Crop Reporting Service, except as otherwise designated.

1/ Excluding dried used for juice.

2/ Estimates made by the Giannini Foundation of Agricultural Economics, University of California, and based upon reports of the California Cooperative Crop Reporting Service and of the Federal-State Market News Service.

3/ Production as indicated on October 1, 1937.

California farm price of grapes by classes, 1919-36

Crop year	: All : : varieties :	: Wine : : varieties :	: Table : : varieties :	: Raisin varieties : : Marketed fresh : : Per dry ton :	: Dried
	: 1 : : Dollars :	: 2 : : Dollars :	: 3 : : Dollars :	: 4 : : Dollars :	: 5 1/ : : Dollars :
1919	: 55	: 50	: 75	: --	: 56
1920	: 65	: 75	: 75	: 40	: 63
1921	: 62	: 82	: 80	: 40	: 51
1922	: 41	: 65	: 60	: 30	: 28
1923	: 22	: 40	: 40	: 20	: 12
1924	: 33	: 63	: 40	: 20	: 19
1925	: 28	: 60	: 20	: 20	: 21
1926	: 25	: 45	: 25	: 20	: 19
1927	: 24	: 45	: 26	: 23	: 16
1928	: 16	: 25	: 26	: 10	: 11
1929	: 24	: 35	: 35	: 20	: 16
1930	: 16	: 20	: 21	: 13	: 16
1931	: 20	: 19	: 35	: 25	: 16
1932	: 12	: 12	: 16	: 19	: 10
1933	: 16	: 20	: 15	: 17	: 15
1934	: 17	: 15	: 23	: 20	: 17
1935	: 13	: 12	: 15	: 12	: 15
1936 3/	: 19	: 17	: 26	: 19	: 18

1/ Column 6 divided by 3.75. 2/ Includes returns from Control Board for unharvested grapes as well as returns from fresh raisin grapes actually marketed.

3/ Data for 1936 are preliminary.



Grapes: Season average price received by growers, selected States, 1930-36

States	1930	1931	1932	1933	1934	1935	1936
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
N. Y. ....	36.00	22.00	19.00	24.00	30.00	25.00	41.00
Mich. ....	33.00	28.00	16.00	20.00	25.00	20.00	36.00
Ohio ....	40.00	26.00	18.00	29.00	35.00	25.00	37.00
Pa. ....	43.00	22.00	16.00	25.00	27.00	23.00	40.00
Mo. ....	60.00	40.00	30.00	35.00	40.00	35.00	50.00
Ark. ....	50.00	40.00	26.00	26.00	25.00	30.00	35.00

1/ Preliminary.

Still Wine: Quantity removed from fermenters and production in commercial wineries by alcoholic classification, 1933-34 to 1936-37

Fiscal year	Wine removed from fermenters 1/	Under 14 percent	Over 14 percent	Total
	Gallons	Gallons	Gallons	Gallons
1933-34 .....	77,778,000	22,164,000	17,528,000	39,692,000
1934-35 .....	91,729,000	14,962,000	27,317,000	42,279,000
1935-36 .....	170,876,000	14,975,000	55,350,000	70,325,000
1936-37 3/ ....	117,236,000	17,624,000	35,374,000	52,998,000

1/ Compiled from reports of the Commissioner of Internal Revenue.

2/ Calculated from figures on stocks and withdrawals as published in reports of the Commissioner of Internal Revenue.

3/ Preliminary.

Still Wine: Tax paid withdrawals by alcoholic classification, 1933-34 to 1936-37

Fiscal year	Under 14 percent alcohol	Over 14 percent alcohol	Total
	Gallons	Gallons	Gallons
1933-34 .....	5,053,269	9,472,419	14,525,688
1934-35 .....	12,140,592	23,259,808	35,400,400
July-Dec. ....	6,408,107	11,715,125	18,123,232
Jan.-June ....	5,732,485	11,544,683	17,277,168
1935-36 .....	15,784,568	31,689,836	47,474,404
July-Dec. ....	8,726,868	16,665,876	25,392,744
Jan.-June ....	7,057,700	15,023,960	22,081,660
1936-37			
July-Dec. ....	11,436,442	22,641,332	34,077,774

Compiled from reports of the Commissioner of Internal Revenue.



## THE STRAWBERRY OUTLOOK FOR 1938

Indications are that strawberry production will be appreciably larger in 1938 than in 1937, the Bureau of Agricultural Economics reports. Prices to growers will probably average somewhat below the relatively favorable 1937 prices. Prices to growers which have been increasing since 1933 were slightly higher in 1937 than in 1936, although production in 1937 was about 20 percent larger than in 1936. October reports indicate a 1938 acreage for picking about 12 percent larger than the 1937 harvested acreage and only slightly below the average of 1928-32. Beds are reported to be in good condition in most areas and appreciably improved over the low condition of a year earlier.

Acreage increases are indicated for each of the different groups of States. The largest increase in acreage is expected in the intermediate States - a 16-percent increase. In the late States the increase in acreage is expected to be about 14 percent and in the second early States about 13 percent while in the early States indications point to a 3-percent increase. In the early States plantings had not been completed by early October. Shortage of suitable plants were reported in some early areas and this factor has tended to limit the increase in acreage.

Strawberry beds in most producing areas came through the summer in generally good condition. Condition of beds of all ages on October 1, 1937 was reported to be 79 percent as compared with 59.6 percent a year earlier when drought and unusually hot weather during the summer severely damaged strawberry beds in many producing areas. The favorable condition of beds, unless adverse factors intervene, should be reflected in better-than-average yields in 1938.

Exact forecasts of strawberry production several months in advance are not possible because of the influence of such factors as droughts, frosts, and excessive rainfall. If the yield per acre in 1938 is as high as in 1937, which appears probable in view of the generally favorable condition of beds, the intended acreage in 1938 would permit of a production of about 320,000,000 quarts. This would be more than 10 percent higher than the 1937 production which was about equal to the 1928-32 average.

### Regional Prospects

In the early States (Alabama, Florida, Louisiana, Mississippi, and Texas) only a 3-percent increase in acreage for 1938 is indicated. Most of the increase will probably occur in Louisiana with other States showing relatively little change. Production in this group of States in 1937 was about 15 percent higher than in 1936 and only slightly below the 1928-32 average. With only a slight increase in acreage indicated for 1938, the marketing situation in the early States in 1938 should be fairly satisfactory to growers but not so favorable as in either of the two preceding seasons.

In the second-early States of (Arkansas, California (Southern district), Georgia, North Carolina, South Carolina, Tennessee, and Virginia), October reports indicate a 13-percent increase in acreage. This increase is largely accounted for by increased plantings in Arkansas, where acreage rose from 7,400 in 1937 to 12,000 indicated for 1938. The 1937 acreage in this State was exceptionally low, however, because of loss of beds from the 1936 drought. Increases are

also indicated for Tennessee with a slight decrease in prospect in Virginia, and with minor changes in acreage indicated for other States.

In the late States (Indiana, Iowa, Michigan, New York, Ohio, Oregon, Pennsylvania, Utah, Washington, and Wisconsin) strawberry acreage in 1938 is expected to be 14 percent larger than the previous record acreage in 1937. The intended 1938 acreage is about 33 percent higher than the 1928-32 average. Increases in acreage in 1938, although indicated for most of the late States, are most pronounced in Oregon and Washington, which account for about two-thirds of the total increase.

Group	Acreage			Production			Farm value		
	5-year: average: 1936 :1928-32:	:	1937	5-year: average: 1936 :1928-32:	:	1937	5-year: average: 1936 :1928-32:	:	1937
	Acres ÷			1,000 24-quart crates			- 1,000 dollars -		
Early.....	37,450	29,300	31,950	2,437	2,050	2,372	11,119	7,985	8,753
Second-early	54,460	45,960	40,800	3,219	2,205	2,225	8,158	5,714	6,973
Intermediate	47,760	43,160	37,300	2,868	1,951	2,332	7,559	5,414	6,913
Late.....	46,280	53,100	53,900	3,093	3,804	4,247	8,966	9,567	12,584
Total United States..	185,950	171,520	163,950	11,620	10,010	11,976	35,802	28,580	35,223

Group	Total		First-year		Second-year		Older		Condition		
	acres		beds		beds		beds		October 1		
	1937	1938	1937	1938	1937	1938	1937	1938	All beds		
									1936	1937	
										Pct. of	
										normal	
Early.....	31,950	32,770	30,030	31,070	1,440	1,500	480	200	55.3	82.7	
Second-early:	40,800	46,300	22,970	24,840	13,180	17,870	4,650	3,590	52.1	72.6	
Intermediate:	37,300	43,200	18,090	24,150	14,860	14,860	4,350	4,190	56.3	70.3	
Late.....	53,900	61,500	24,890	33,250	17,880	22,290	11,130	5,960	70.2	82.8	
Total United:											
States..	163,950	183,770	95,980	113,310	47,360	56,520	20,610	13,940	59.6	79.0	



## THE OUTLOOK FOR TREE NUTS FOR 1938

### Summary

It is probable that production of tree nuts in the United States will continue at a high level, according to the annual outlook of the Bureau of Agricultural Economics. The basic trend is expected to continue moderately upward.

Three other important trends are revealed by the data available for tree nuts during the last 15 years: (1) a steady and rapid increase since 1928 in the consumption of cashew nuts, (2) reduced importance of almonds in the total consumption of all tree nuts, and (3) continuation of farm prices of walnuts and improved varieties of pecans at the low levels established early in the depression. It is probable that these trends will characterize the next 2 or 3 years, at least. A further trend is the rapidly increasing production of filberts in Oregon and Washington.

The outlook is for lower prices for tree nuts in 1937-38, since the pecan, almond, and English walnut crops are all substantially greater than in 1936.

Almond production in 1937 is expected to be the highest on record--16,200 tons. This crop follows 5 years of successively smaller crops, the 1936 crop having amounted to only 7,600 tons. During the 5 years 1933-42, bearing acreage is expected to increase moderately, and production is likely to average in the neighborhood of 13,000 tons, depending upon weather conditions. The very large domestic crop would seem to indicate a lower farm price in the 1937-38 marketing season, a somewhat greater consumption, and smaller imports than in 1936-37.

The 1937 pecan crop is expected to amount to about 35,300 tons -- slightly more than the average for the preceding 5 years. Over the past 6 or 7 years there has been an upward trend in the production of improved varieties of pecans whereas no trend has been noticeable in total production. Over the next few years a small rate of increase in total production seems likely together with an increase in the proportion of improved varieties produced.

The expected 1937 English walnut production of 59,600 tons is the heaviest on record, exceeding the previous record, made in 1935, by 8 percent and exceeding the 1932-36 average by 32 percent. This is in line with the long-time trend, which continues strongly upward. It is not unlikely that crops in excess of 50,000 tons will become usual during the next 5 years. With the prospects for heavy production, it seems probable that walnut producers will not receive as high prices in the future as in the past at given levels of consumer income. Another factor pointing in the same direction is the narrowed margin between the price of improved varieties of pecans and the price of walnuts.

The production of filberts in 1937 is expected to amount to approximately 2,230 tons, which is 21 percent above the 1936 production and

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about twice the 1932-36 average production. An average production in the neighborhood of 3,000 tons seems likely for the three seasons 1938, 1939, and 1940.

Since imported nuts make up a large percentage of the tree nuts consumed in the United States, the import duties that must be paid on them are an important element in the determination of tree nut prices and consumption. Tariffs on tree nuts were raised sharply by the Tariff Act of 1922, and were raised again by the Tariff Act of 1930. The reciprocal trade agreement with Brazil, which took effect January 1, 1936, lowered the tariff on Brazil nuts from 4-1/2 to 2-1/4 cents a pound on shelled nuts, and from 1-1/2 to 3/4 cents a pound on unshelled nuts.

#### Production Trend Upward

With record filbert, almond, and English walnut crops and a somewhat above average pecan crop indicated for 1937, the combined production in the United States of these four crops is expected to be approximately 112,300 tons, a figure not far below the record of approximately 118,600 tons in 1935, and 26 percent above the 5-year average for 1932-36.

The large crop expected in 1937 is in line with the upward trend in United States nut production. Walnut production has been increasing steadily for many years, and with especial rapidity since 1926. Filbert production, while of lesser importance, is in the early stages of rapid expansion. Almond production and pecan production increased materially during the 1920's but during the past 9 or 10 years have been characterized by wide fluctuations around practically constant levels. The 1935 peak in the combined production may not be reached again soon. Unless there is unforeseen abandonment of orchards or pulling of trees, however, a combined nut crop in the neighborhood of 100,000 tons will probably become typical. This means lower prices for tree nuts than in the past at given levels of consumer income, if the increased production is to be moved into consumption.

The following table shows the expected 1937 production, the 1936 production, and the average production from 1932 to 1936 of walnuts, pecans, almonds, and filberts.

## U. S. Nut Production

	: Expected, : : 1937 : : 1,000 tons :	: 1936 : : 1,000 tons :	: Average, : : 1932-36 : : 1,000 tons :	: Expected as a percentage : of 1936 : : Percent :	: of average : of average : Percent :
English walnuts	: 59.6 :	: 43.3 :	: 45.2 :	: 138 :	: 132 :
Pecans	: 34.4 :	: 20.1 :	: 32.1 :	: 171 :	: 107 :
Almonds	: 16.2 :	: 7.6 :	: 10.9 :	: 213 :	: 149 :
Filberts	: 2.10 :	: 1.85 :	: 1.06 :	: 114 :	: 198 :
Combined production	: 112.3 :	: 72.85 :	: 69.26 :	: 154 :	: 126 :

Recovery in Consumption

Consumption of tree nuts in the United States showed a persistent downward trend during the twenties and on up to 1934. In the marketing years 1935-36 and 1936-37 (October to September), however, there was a sharp recovery. The following table traces the trend of consumption on a per capita basis.

Apparent per-capita consumption of tree nuts in the U. S.<sup>1/</sup>  
(shelled basis)

Average, 1922-23 to 1925-26 Pounds	Average, 1926-27 to 1928-29 Pounds	Average, 1929-30 to 1931-32 Pounds	Average, 1932-33 to 1934-35 Pounds	Average, 1935-36 and 1936-37 <sup>2/</sup> Pounds
1.31	1.24	1.10	.36	1.16

<sup>1/</sup> Includes walnuts, almonds, pecans, filberts, chestnuts, Brazil nuts, cashew nuts, pistachios, and pignolias.

<sup>2/</sup> Preliminary.

The per-capita consumption of walnuts, almonds, and filberts have all declined during the past 15 years, as shown by the following table:

U. S. per-capita consumption of walnuts, almonds, and filberts  
(shelled basis)

	Average, 1922-23 to 1924-25 <sup>1/</sup> Pounds	Average 1934-35 to 1936-37 <sup>1/</sup> Pounds
Walnuts	.44	.32
Almonds	.25	.11
Filberts	.10	.04

<sup>1/</sup> Marketing years from October to September.

During the past 15 years, almonds have declined from second rank to fifth rank in volume of consumption. Formerly outranked only by walnuts, they are now outranked by walnuts, pecans, cashew nuts, and Brazil nuts. Pecan consumption has fluctuated around the level of 1/5 of a pound per capita ever since 1925-26 and has come to rank second to walnut consumption. Cashew nuts, practically unknown to American consumers before 1928, have rapidly become an important part of nut consumption. A preliminary estimate places the apparent consumption of cashew nuts at .20 pound per capita for the season 1936-37.

The following table has been drawn up to show the relative importance of each kind of nut in total tree-nut consumption. An average of the 1935-36 and 1936-37 seasons has been used because a significant part of the 1935 pecan crop was carried over into the 1936-37 season, but the exact amount of the carry-over is unknown. Apparent consumption in these two seasons averaged approximately 74,300 tons (shelled basis), of which 38,800 tons were imported and 35,500 tons were produced in the United States.

Apparent consumption of tree nuts in the United States  
(Average for the two seasons Oct. 1935 - Sept. 1936  
and Oct. 1936 - Sept. 1937 <sup>1/</sup>)  
(Shelled basis)

	Consumption			Percent of
	of nuts produced:	of imported:	Total	total consumption
	in the U. S.	nuts		of all tree nuts
	1,000 tons	1,000 tons	1,000 tons	Percent
Walnuts	18.3	2.3	20.6	27.7
Pecans	14.0	-	14.0	18.9
Cashew nuts	-	11.8	11.8	15.9
Brazil nuts	-	9.3	9.3	12.5
Almonds	2.5	5.2	7.7	10.4
Chestnuts	-	7.1	7.1	9.5
Filberts	.7	2.0	2.7	3.6
Pistachios	-	.9	.9	1.2
Pignolias	-	.2	.2	.3
All tree nuts	35.5	38.8	74.3	100.0

<sup>1/</sup> Preliminary

#### Recent Increase in Imports

Imports of tree nuts decreased rapidly from the early 1920's up to 1934 -- more rapidly, indeed, than domestic production increased. By 1933-34 (October to September) the volume of imported tree nuts was only 52 percent as great as it had been on the average in 1922-23 to 1924-25. Since the 1933-34 season there has been a marked recovery in imports, corresponding to the recovery in total apparent consumption. The following table is designed to show the trends in domestic production and imports over the last 15 years:



## Trends in United States tree nut production and imports

Crop year (Oct.-Sept.)	Production		Imports for
	Unshelled basis	Shelled basis	consumption
	1,000 tons	1,000 tons	(shelled basis) 1,000 tons
Average, 1922-23 to 1924-25	54.2	21.0	52.3
Average, 1925-26 to 1929-30	76.4	29.7	44.2
Average, 1930-31 to 1934-35	83.1	32.3	32.1
Average, 1935-36 to 1936-37 <u>1/</u>	95.7	38.0	38.8

1/ Preliminary.

Since imported nuts make up a large percentage of the nuts consumed in the United States, the import duties that must be paid on them are an important element in the determination of nut prices and consumption. Tariffs on nuts have been raised twice since the World War. The Tariff Act of 1922 raised the average duty on imports of unshelled tree nuts from 1.6 cents per pound to 2.8 cents per pound and on imports of shelled tree nuts from 3.8 cents per pound to 11.5 cents per pound. The Tariff Act of 1930 again raised the duties, the average for unshelled nuts going to 3.9 cents per pound, and for shelled to 14.6 cents per pound. The reciprocal trade agreement with Brazil, which took effect January 1, 1936, lowered the tariff on Brazil nuts from 1-1/2 cents to 3/4 cent a pound on unshelled nuts, and from 4-1/2 to 2-1/4 cents a pound on shelled nuts.

Farm Prices; Almonds Up

The farm price of almonds advanced sharply for the 1935 crop and again for the 1936 crop, but the farm prices of walnuts, pecans, and filberts have remained within the range established during the depression. Price relationships now existing differ from those before the depression in that the improved varieties of pecans are considerably cheaper in relation to walnuts and almonds. Whereas the farm price of pecans for the years 1925-29 averaged 67 percent above the farm price of walnuts and 82 percent above the farm price of almonds, the percentages for the period 1931-36 are only 34 percent and 19 percent, respectively. The following table gives a more detailed comparison of actual prices:

## Farm prices of tree nuts produced in the U. S.

	Average, 1925-29	Average, 1931-34	1935	1936
	Cts. per lb.	Cts. per lb.	Cts. per lb.	Cts. per lb.
Walnuts	20.0	10.4	10.2	9.9
Almonds	18.4	8.8	14.0	20.1
Filberts	-	11.9	13.0	13.5
Pecans, improved	33.4	13.9	12.5	14.6
Pecans, wild and seedling	13.6	6.8	4.9	9.7

The Outlook for Filberts

Filbert production is a recently established and rapidly growing industry in Oregon and Washington. According to the census of 1930, 83 percent of all the filbert trees in the United States were to be found in Oregon, and 98 percent in Oregon and Washington together. A survey made in 1934 and 1935, covering all of the important filbert-producing counties in Oregon and Washington, showed that in these counties all but 2-1/2 percent of the filbert trees now standing were planted after 1919, and all but 24 percent, after 1926. The age distribution of the trees counted by the survey is good evidence that plantings have been made at a rapidly increasing rate.

## Number of existing filbert trees planted annually

	1910-19	1920-26	1927-30	1931-34	1935
Oregon	1,930	26,900	63,300	76,200	85,100
Washington	320	4,400	12,200	19,900	19,000
Total	2,250	31,300	75,500	96,100	104,100

In the 18 counties surveyed in Oregon 853,182 trees were counted, and in the 13 counties in Washington, 182,399 trees.

Average farm prices for Oregon filberts, reported each year since 1929, have fluctuated between \$200 and \$340 per ton. Over the period 1931-1934, the farm price averaged \$237 per ton, and for 1935 and 1936, \$265 per ton. These prices have been sufficiently high to induce a rapid expansion of the industry.

Domestic production of filberts is protected by an import duty which since 1930 has been 5 cents per pound on unshelled filberts and 10 cents per pound on shelled filberts. Five cents per pound is equivalent to \$100 per ton.

The level of Oregon filbert production has been rising steadily since it was first officially reported, in 1927. Production in that year was estimated at 60 tons. It is expected that the 1937 crop will amount to 2,230 tons. The trend of production is indicated by the following table:

Production of filberts in Oregon

	1927-29	1930-32	1933-35	1936-37
Average annual production (tons)	153	360	1,010	2,040

The plantings already made by 1935 make it certain that production will continue to increase rapidly up to 1945, unless some condition now unforeseen occurs, such as unusual weather, the appearance of a serious disease or insect pest, or pulling of trees already planted. Judging from the information made available by the survey, the Oregon filbert crops of 1938, 1939, and 1940 are likely to fall between the limits of 2,000 and 3,800 tons, and will probably average close to 3,000 tons. It is within the realm of possibility that by 1945 a crop of 5,000 tons or more may be produced in Oregon.

Consumption of filberts in the United States is at a much lower level now than in the first few years after the war, imports having declined rapidly and steadily since 1924. During the period from October 1919 through September 1924 consumption averaged approximately 13,000 tons, or .24 pound per capita, annually, while for the period October 1932 through September 1937 it averaged only 5,400 tons, or .08 pound per capita. (These figures are on an in-the-shell basis.) Although the drop in consumption was undoubtedly intensified by the low level of consumers' income in recent years, the trend has been consistently downward, and it does not appear probable that consumption will return in the near future to the level of 15 years ago.

#### The Outlook for English Walnuts

The 1937 production of walnuts in California and Oregon is expected to amount to approximately 59,600 tons. This is the largest United States walnut crop ever recorded. It exceeds the record 1935 crop by 4,400 tons and is 32 percent above the average production for the 5 years 1932-36.

Long-time trend in walnut production is still strongly upward. Bearing acreage in California is expected to continue to increase during



the next five years although by 1942 the rate of increase will probably be very slight. It is known that new plantings in the five years from 1932 to 1936 were very light. A severe freeze in the fall of 1935 and a lighter one in the fall of 1936 caused considerable damage to Oregon walnut trees, so that the productive capacity of Oregon groves has suffered a substantial set-back. It is expected, however, that under normal weather conditions Oregon production will resume its upward trend. It is not improbable that in the next five years a total United States production in excess of 50,000 tons will be usual rather than exceptional.

The long-time outlook for walnuts includes (1) the prospective high level of domestic walnut production, (2) a continuation of large pecan crops and low prices for improved pecans, and (3) measures taken under the control program for walnuts.

Since October 1933 the walnut industry has been operating under a marketing agreement. Protection of the domestic unshelled walnut market has been the chief aim of the control program instituted under the agreement. It has been accomplished by diverting part of the marketable crop into the export and the domestic shelled markets, sales in these markets being made at prices lower than those prevailing in the protected market. The effectiveness of this program depends in part upon the United States tariff on walnuts. The amounts of the duties have been, since 1930, 5 cents per pound on unshelled walnuts and 15 cents per pound on shelled. In the marketing of the 1935 crop a new feature was added to the program in the payment to the industry by the Federal Government of approximately 5 cents a pound on the quantity diverted from the domestic unshelled market. This policy was also applied to the 1936 crop. Under the control program the United States has become an exporter of unshelled walnuts to the quantity of 5,000 or 6,000 tons annually.

The price that can be returned to growers under the control program depends on a number of factors. With reference to the current marketing year (1937-38) the bumper walnut crop will meet the competition of an average pecan crop, which, however, is larger than last year's. Consumer income during the holiday season of 1937, when a large proportion of the nut crops are consumed, is expected to be somewhat higher than in the corresponding season of 1936. On the whole there probably will not be much change in domestic demand for walnuts. The price of walnuts in European markets is expected to be lower in 1937-38, because of an unusually heavy 1937 European production of both walnuts and filberts. (Walnuts and filberts compete with each other in European markets.) This is an unfavorable factor in the exporting of California walnuts of the 1936 crop, because the bulk of the walnuts to be exported each year is held over to be shipped at the beginning of the following season, so that California walnuts produced in 1936 appear in European markets in the 1937-38 marketing season. The export outlook for the 1937 California walnut crop will depend upon the size of the European crop in 1938, together with the size of the European carry-over from the very large crop of 1937.



### The Outlook for Almonds.

The 1937 almond crop is expected to amount to approximately 16,200 tons. This is the largest crop on record, since it slightly exceeds the 1926 crop of 16,000 tons. Following as it does a 5-year period during which each crop was smaller than the preceding one, the 1937 crop is more than twice as large as the 1936 crop and 48 percent above the average production of 10,940 tons during the 5 years 1932-36.

The almond crop varies greatly in size from year to year because it is very susceptible to unfavorable weather conditions. Partly because of these year-to-year fluctuations, almond production has shown no significant trend over the last ten years. The basic trend in productive capacity, however, appears to have been slightly upward. Bearing acreage has increased slightly, and the proportion of trees of full-bearing age has increased substantially.

A further moderate increase in bearing acreage is expected in the next 5 years. It is known that plantings were rather heavy in 1934, 1935, and 1936. Most of the expansion will take place in the counties of the Sacramento and San Joaquin Valleys, where growing conditions for almonds are relatively favorable. An average production in the neighborhood of 13,000 tons seems probable for the 5 years 1938-42, given average growing conditions.

Production of almonds in the United States is protected by a tariff. Under the Tariff Act of 1930, a duty of 5-1/2 cents per pound must be paid on imports of almonds in the shell, and a duty of 16-1/2 cents per pound on imports of unshelled almonds. Five and one-half cents per pound is equivalent to \$110 per ton.

With successive crops becoming smaller and smaller from 1931 to 1936, the California farm price of almonds recovered in 1935 to \$280 per ton from its depression level of around \$165 per ton, and in 1936 went on up to \$402 per ton, a price which had been exceeded only twice in the preceding 17 years. A sharply lower price is likely for the bumper 1937 crop.

Apparent almond consumption declined steadily from 1923-24 to 1934-35, reaching a low point in the latter season of .08 pound per capita (calculated on a shelled basis), as compared with .28 pound per capita in 1923-24. It recovered sharply in 1935-36, however, to .14 pound per capita, and then in 1936-37 fell back to .10 pound per capita, because of the very short domestic crop and the unsettled conditions in the Mediterranean producing countries, which hindered imports. Consumption will probably increase again in 1937-38, under the stimulus of lower prices attendant upon the large domestic crop. Imports may be expected to be less than in 1936-37.

The long-continued decline in per-capita almond consumption has already been pointed out. During the period of decline in almond consumption, the per-capita consumption of Brazil nuts and of pecans

remained relatively steady, and that of cashews greatly increased. These facts seem to indicate that recovery of almond consumption to the levels of the 1920's is improbable, at least in the near future.

### The Outlook for Pecans

Following the record 1935 crop of approximately 53,000 tons and the very small 1936 crop of approximately 20,000 tons, the 1937 pecan crop is expected to amount to around 34,400 tons, or 7 percent more than the 1932-36 average production. The crop of improved varieties will probably be close to 10,200 tons, 11 percent more than in 1936 and 26 percent above the average for 1932-36, while production of wild and seedling sorts is expected to be in the neighborhood of 24,200 tons, well over twice the 1936 production but still barely equal to the 1932-36 average.

The outstanding feature of pecan statistics continues to be the relatively low level of prices for improved pecans existing throughout the years from 1931 to 1936. The United States average farm price (December 1) for the 1936 crop of improved varieties was 14.6 cents per pound, which is well within the range from 13.0 cents to 15.4 cents per pound which has prevailed since the 1931 season. At this level, the resulting margins by which the farm price of improved pecans exceeds the farm price of walnuts and the farm price of almonds are much narrower than they were prior to 1931. Keener competition of pecans with walnuts and almonds is to be expected as long as the margins remain narrowed. On the side of supply, the sharply lowered prices may be leading to such neglect of orchards as to offset a large part of the increase in production that was expected from the trees that were under bearing age in 1929.

On the basis of a survey of pecan-tree numbers and ages made in 1929, and with a liberal allowance for mortality among young trees, it was estimated that there would be 20 to 25 percent more trees of bearing age in 1940 than in 1929. Since 1929, no further exact information has become available. It is known that in the States east of the Mississippi River there have been both considerable neglect of orchards and thinning out of those orchards which are receiving good care. In the future a greater proportion of the crop will probably be produced by the more efficient growers. In Texas and Oklahoma a great deal of top-working of wild and seedling trees with improved varieties has been carried on, some new groves of improved varieties have been planted, and there has been extensive thinning of native stands to increase their productivity. On the whole, these factors would seem to point to a slightly upward trend in production and to an increase in the proportion of improved varieties. The figures on actual production over the last 10 years show an upward trend in the production of improved varieties, but fail to show a perceptible trend in total production.

Although some of the wild and seedling pecans harvested each year are sold to consumers in the unshelled form, shelling is the main outlet

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for this type. The improved varieties are largely sold to consumers in the unshelled form.

A program of developing an export market for unshelled pecans was undertaken by the Federal Government during 1935-36. In that season payments of 5 cents a pound were made to exporters on exports of approximately 400 tons of improved varieties. In 1936-37 payments averaging about 6 cents a pound were made on exports of approximately 960 tons.

